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ANNUAL REPORT

OF THE

Department of Public Works

OF THE

PROVINCE OF ALBERTA

1965-66

PUBLISHED BY ORDER OF THE LEGISLATIVE ASSEMBLY

EDMONTON, ALBERTA
Printed by LEE S. WALL, Printer to the Queen's Most Excellent Majesty
1967

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THE HONOURABLE F. C. COLBORNE

Minister of Public Works

EDMONTON, October 1, 1965.

To His Honour
J. GRANT MacEWAN,
Lieutenant Governor of the
Province of Alberta.

Sir:

The undersigned has the honour to submit herewith the Report of the Department of Public Works for the year ended March 31, 1966.

Respectfully submitted,

F. C. COLBORNE,
Minister of Public Works.

DEPARTMENT OF PUBLIC WORKS

Edmonton, Alberta,
October 1, 1966.

TO:
The Honourable F. C. Colborne,
Minister,
Department of Public Works.

Sir:

I have the honour to submit herewith a report covering the activities of the Department of Public Works for the fiscal year ending March 31, 1966. This report comprises:

1. The functions of the Department.
2. An organization chart.
3. Detailed procedure on calling of tenders and award of contracts.
4. A list of tenders called, bids received and contracts awarded.
5. Programme of construction describing buildings under construction or completed during the year for the following departments:

Agriculture

Veterinary Diagnostic Laboratory, Lethbridge.
Agricultural and Vocational College, Vermilion.

Attorney General

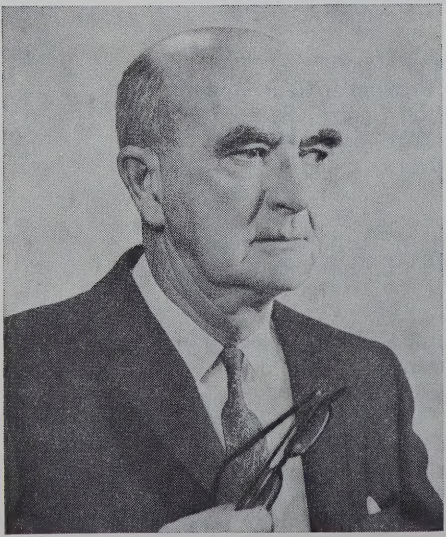
Alberta Institute for Girls, Belmont.
Administration Building, Provincial Gaol, Calgary.
New Belmont Rehabilitation Centre, Edmonton.
Magistrate's Residence, Fort McMurray.
Provincial Gaol, Peace River.

Education

Southern Alberta Institute of Technology, Calgary.
Northern Alberta Institute of Technology, Edmonton.

Health

Foothills Provincial General Hospital, Calgary.
Alberta Hospital, Claresholm.
Cancer Clinic Hospital, Edmonton.
Provincial Laboratory of Public Health, Edmonton.
Veterans' Nursing Home, Edmonton.
Deerhome Institution, Red Deer.
Storage Warehouse, Deerhome Institution, Red Deer.
Student Nurses' Residence, Alberta School Hospital, Red Deer.



S. E. KENWORTHY

Deputy Minister
of Public Works

Highways

Department of Highways Building, Calgary.
Maintenance and Repair Shops, Edmonton East.
Highway Maintenance Garages — Hines Creek
Manning
Two Hills
Camrose
Grande Prairie
Ponoka
Hinton
Duchess
Lac La Biche

Lands and Forests

Forestry Headquarters, Blairmore.
Provincial Park, Cypress Hills.
Forestry Headquarters, Footner Lake.
Forestry Headquarters, Fort McMurray.
Forestry Training School, Hinton.
Forestry Headquarters, Peace River.
Forestry Headquarters, Slave Lake.

Provincial Secretary

Provincial Museum and Archives, Edmonton.

Public Welfare

Homes for the Aged — Bashaw
Calgary — Elbow Valley
Cardston
Claresholm
Edmonton — Belvedere #3
Ottewell #2
Rosslyn #2
Grande Prairie
Wainwright
Woodside Home, Edmonton.
Welfare Centre, Gunn.
Receiving Home for Children, Lethbridge.

Public Works

Provincial Building, Coronation.
Provincial Building, Spirit River.
Carpenter Shop, Alberta Hospital, Ponoka.
Carpenter Shop, Red Deer.

Treasury

Treasury Branches — Bow Island
Breton
Three Hills

University of Alberta, Calgary
Biological Sciences Complex.
Calgary Hall.
Central Heating and Cooling Plant.
Underground Utilities Distribution System.
Bow River Cooling Water System.
Engineering Centre, Stage II.
Kananaskis Science Station.
Student Housing Complex.

University of Alberta, Edmonton
Central Cooling Plant.
Environmental Control Laboratory.
Henry Marshall Tory Building.
Steam Line Addition.
Underground Radiation Laboratory, Chemistry Building.
Vivarium.

Alberta Liquor Control Board
Liquor Warehouse, Calgary.
Residence, Fort McMurray.

Oil and Gas Conservation Board
Core Storage Building, Calgary.
Office Building and Garage, Edmonton.

Research Council of Alberta
Clover Bar Pilot Plant and Laboratory, Edmonton.

Paving and Related Work — Government Institutions.

6. Report on employment of Private Architects and Engineers showing all commissions awarded during the year.
7. Maintenance Branch.
8. Property Administration Branch.
9. Mechanical Branch.
10. Personnel Officer.
11. Grants payable towards the cost of construction of swimming pools.
12. The Crown Properties Municipal Grants Act showing grants paid in lieu of taxes.
13. A table showing total expenditures over the last five years.

During the fiscal year under review, the Department undertook a more extensive programme of design, construction and maintenance than at any time during the past years. Illustrations are included in this report of some of the buildings that were under construction or completed.

The internal organization of the Department was carefully reviewed and an effort has been made during the past year to define the responsibilities of senior staff in order to achieve firm terms of reference for each section of the Department.

Working in close association with representatives of the Alberta Construction Association, this Department made major revisions to our "Conditions of Contract" which are now patterned to a large extent on the "Conditions of Contract" as approved by the Canadian Construction Association.

Acting on your instructions, a close scrutiny was made of the "Fair Wage" clause in our contracts by this Department and the Department of Labour. The new revised "Fair Wage" clause has met with general approval from Contractors and the trade unions.

Several of the more important routines of the Department are now being conducted by committees established for the various specific purposes. A Tendering Committee, under the chairmanship of the Assistant Deputy Minister, reviews all construction project tenders received and makes recommendations for award of contracts. A Space Committee headed by the Property Administrator, has been established to review the requirements for accommodation of all government departments and agencies, and makes recommendations for provision of suitable space. A selection committee initially chaired by the Assistant Deputy Minister and subsequently by the Liaison Architect, deals with the selection of private architectural firms and makes recommendations to the writer for the commissioning of such firms on the basis of their capabilities in relation to the particular assignment. With the assistance of various staff members, the Assistant Deputy Minister has also developed Terms of Employment for Private Architectural Consultants which are now being issued by the Liaison Architect to all firms commissioned. I believe that the committees which I have mentioned are functioning very well.

The heavy workload which the Department was required to assume this year was accepted readily by the entire staff. I may report that I believe the general morale of the staff is high and I should like to take this opportunity to record my appreciation for the splendid co-operation given me by all concerned during this past year. May I also mention that I am very happy to be working under your Ministry where staff is hired and private consultants are commissioned with no preference being given to any because of their race, religion or politics.

Respectfully submitted,

S. E. KENWORTHY,
Deputy Minister of Public Works.

THE FUNCTION OF THE DEPARTMENT OF PUBLIC WORKS

The Department of Public Works is required to provide suitable accommodation, the necessary furnishings and equipment to all Departments of the Government so that the Departments may carry out the various functions required of them. Such accommodation is provided in buildings rented, purchased or constructed by the Department of Public Works.

The Department is responsible for the construction of all Provincial Government Buildings.

The chief officials of the Department are:

Minister of Public Works	Hon. F. C. Colborne
Deputy Minister of Public Works	Mr. S. E. Kenworthy
Assistant Deputy Minister of Public Works	Mr. G. D. Menzies
Director, Design & Construction	Mr. J. F. Hunt
Chief Architect	Mr. H. A. Henderson
Chief Engineer	Mr. H. H. Neelands
Mechanical Superintendent	Mr. W. S. Davies
Administrative Accountant	Mr. K. C. Thomas
Superintendent of Maintenance	Mr. H. W. Brettelle
Superintendent of Construction	Mr. H. Kinsey
Co-ordinator of Capital Works	Mr. V. C. Heim
Property Administrator	Mr. E. E. Wilson
Personnel Officer	Mr. W. A. R. Barry

The Department is also responsible for the servicing and maintenance of all Provincial Government owned buildings, with the exception of various self-contained institutions, such as the Colleges of Agriculture and the University of Alberta. The maintenance and servicing of these buildings needs the services of a large group of men of assorted technical skills. Carpenters, plumbers, electricians and other tradesmen keep these buildings in good repair. Gardeners maintain the surrounding grounds which are quite extensive at some points, for example, the Provincial Mental Institute, Oliver and the Southern Alberta Institute of Technology, Calgary. Caretakers keep the buildings clean, men operate the elevators, and watchmen guard the buildings at night.

The extensive programme of construction which we are presently undertaking requires not only the services of a large staff of architects, engineers, draughtsmen, surveyors and building inspectors, who design and plan the buildings and supervise the work of the contractors but, also, the engagement of private consulting architects and, in turn, their engineering consultants. A short résumé dealing with the engagement of private architects follows later.

Some urgent and also minor construction work is undertaken by our own forces. Such work is kept to a minimum because it is the policy of the Department to have whatever construction work necessary done whenever possible by the contractors. This requires the Department to maintain a staff of tradesmen which is augmented by temporary staff as the requirements of the work necessitate.

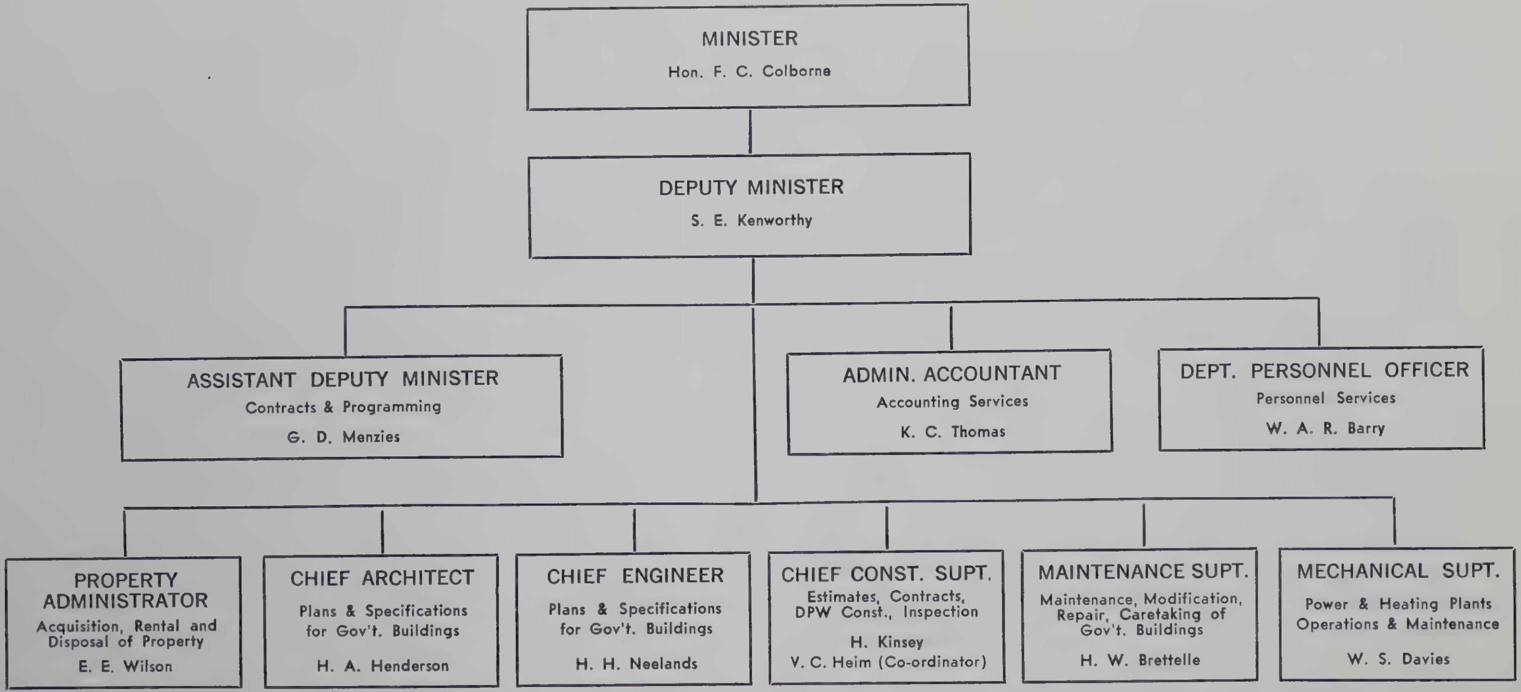
The Department also operates various trade shops where furniture and equipment such as laboratory benches, etc., are made.

A group of engineers, firemen and tradesmen working under the direction of the Mechanical Superintendent is responsible for the supply of electric power, heat, water and sewage disposal at the eighteen largest institutions. These men also design, install and maintain the special equipment necessary. At these institutions, farm machinery, milking, canning, laundry, kitchen and fire fighting equipment are also maintained and kept in good repair by the staff. The utilities and maintenance service of a large institution is comparable to the servicing of a town of two or three thousand people.

The Department also has a number of other functions including the arrangements for the installation and rental of telephones, and, when required, the buying and leasing of lands for building sites. The Department is also responsible for the renting to civil servants of Government-owned residences which are located throughout the Province, mainly at the Provincial Mental Institutions and Gaols, and parking stalls on Government property in Calgary and Edmonton.

A large modern garage, located on the ground floor of Block "A", Terrace Building, Edmonton, services the automobile fleet of the Government.

ORGANIZATION CHART OF THE DEPARTMENT OF PUBLIC WORKS



Properties
Rentals
Telephones
Parking
Crown Properties
Municipal Grants Act

Design and plans for construction of new buildings and renovation of old buildings. Preparation of specifications.

Inspection of plans for construction and inspection and supervision of new construction. Contracts, progress reports, equipment and furnishings, D.P.W. job orders.

Maintenance and caretaking of all government buildings and grounds. Supervision of all tradesmen and workshops. Servicing government vehicles. Operation of D.P.W. truck fleet.

Maintenance and operation of Heating & Power Plants and utility services as required at major government institutions.

CALLING OF TENDERS AND AWARDING OF CONTRACTS

Departments of the Government which need additional work space submit their space requirements to the Department of Public Works. If, in order to provide this additional space, a new building is deemed necessary, the Architectural Office effects liaison with the Department or Departments concerned, and the actual space requirements and the purpose of the proposed building are determined. In co-operation with the Departments which will be housed in the building, preliminary plans are drawn, and from such plans an estimate of the cost of construction is obtained. A sum of money is submitted in the annual estimates for the next fiscal year for approval by the Legislature. Needless to say, the actual amount of money requested is dependent upon the amount of construction that this Department estimates will be done in the following fiscal year. If actual construction is not expected in the following fiscal year, a nominal sum not exceeding $10,000.00 is requested to cover preliminary investigations on the site, which may include soil testing and/or utility line relocations.

The design and the basic construction materials of which the structure will be built are determined by the Deputy Minister in consultation with the Director of Design and Construction. Detailed plans are then drawn and submitted for approval to the Deputy Minister, bearing the signature of the Chief Engineer and the Chief Architect. If approval is obtained from the Deputy Minister, the plans are submitted to the Minister of the Departments concerned and these Ministers are required to sign the plans. Finally, the plans are submitted to the Minister of the Department of Public Works for signature.

Advertisements calling for tenders are placed in the major newspapers throughout the Province, in Trade Papers and the various Construction Associations and such advertisements usually run for a period of three days.

The size of the project under construction determines the length of the "tender period". All tenders are opened in public at two o'clock on a Thursday afternoon in the Conference Room of the Department of Public Works. The Department will consider the use of acceptable alternate materials to those specified during the "tender period" but applications for such alternate approvals will not be accepted later than ten days prior to the closing date of tenders. No request for the employment of alternate materials is considered after the contract has been awarded. When it is necessary to issue addenda approving alternate materials or a change in design, such addenda are issued at least seven days prior to the closing of tenders and, incidentally, these addenda are sent by double registered mail to any contractor who has indicated his intention to bid on the project by obtaining plans and specifications. The plans and specifications are available by the payment of a nominal deposit to those firms registered in or eligible for registration in the Province of Alberta. This is refunded when the plans and specifications are returned to the Department within a specified time limit. Additional copies of the plans and specifications are also sent to the Construction Associations in the major cities throughout the Province, and to the other major cities in Canada in the case of larger projects.

During the past year the Department has continued to use the services of the Alberta Bid Depository for all contracts exceeding $100,000.00. The Alberta Bid Depository is operated by the Alberta Construction Association, which represents the building industry in Alberta. This system requires all sub-contractors to send to the Alberta Bid Depository any bids the sub-contractor wishes to submit to a general contractor. The Alberta Bid Depository distributes to the general contractors the bids received from the sub-contractors.

Each tenderer must submit with his tender a sum of not less than 10% of the total tender price. While such deposit is usually by certified cheque, the Department would accept cash, Dominion of Canada Bearer Bonds or a Bid Bond. At the close of the tender opening, the tender deposits submitted by the two lowest tenderers are held pending a review of tenders. The lowest tender is checked carefully by the Department Tendering Committee to ensure that it complies with the specifications and that all sub-contractors are shown and that those shown are acceptable to the Department. A Bid Sheet is prepared and signed by the committee that opened the tenders and forwarded to the Minister of Public Works with a Press Release giving complete details. Following the Minister's approval, a letter of intent is forwarded by the Department to the successful tenderer advising that contract documents are being prepared for his signature. The contract documents are prepared in triplicate and forwarded to the contractor. When returned properly signed by the contractor, they are then signed by the Minister of Public Works.

When the successful contractor returns the signed contract documents to the Department he may substitute his certified cheque, which equals not less than 10% of the total tendered price, with a 100% Material and Performance Bond. If he does not do this but leaves as a guarantee or security deposit the original certified cheque or replaces this cheque with Dominion of Canada Bearer Bonds equal to 10% of the total tendered price, the Department retains as a holdback 10% of the total of each progress estimate. However, if the contractor does substitute a 100% Material and Performance Bond for his original certified cheque, the

Department retains 15% of the total of each progress estimate. It will thus be seen that when the contractor has completed the project, the Department has either:—

1. A certified cheque or Dominion of Canada Bearer Bonds equal to 10% of the total tendered price as a guarantee for the satisfactory completion of the contract and also a holdback equal to 10% of the total payments made by progress estimates, or
2. A 100% Material and Performance Bond as a guarantee for the satisfactory completion of the contract and also a holdback equal to 15% of the total payments made by progress estimates.

The Department makes an inspection of the completed project and if the contract has been completed to the satisfaction of the Department, payment of the monies held back from the payment of each progress estimate is made to the contractor 30 days later. If the project is not completed to the satisfaction of the Department, the payment of the monies held back from the payment of each progress estimate is withheld until all deficiencies have been corrected.

Material and performance bonds expire one year after the acceptance of the project, thus providing a guarantee for that period. If a certified cheque or Government of Canada bonds equal to 10% of the tender price has been deposited as a guarantee for the successful completion of the contract, the cheque or bonds are returned to the contractor one year after the completion of the project.

TENDERS CALLED AND CONTRACTS AWARDED

THE FOLLOWING BIDS WERE OPENED IN PUBLIC AND CONTRACTS AWARDED DURING THE FISCAL YEAR WHICH ENDED MARCH 31, 1966. Bids marked with an asterisk were withdrawn by the tenderers before this Department had forwarded a letter of acceptance to the bidder, or were rejected by this Department because the bidder failed to comply with the regulations governing the submission of tenders. Where the low bid was withdrawn or rejected and the contract awarded to the second lowest bidder, authority for so doing was obtained by Order of the Lieutenant Governor in Council.

CONTRACT TENDERED FOR AND TENDERERS	**AMOUNT BID**
STORAGE WAREHOUSE, DEERHOME INSTITUTION, RED DEER. April 15, 1965.	
W. R. Sandquist Construction Ltd.	$ 76,419.00
Hornstrom Brothers Construction Ltd.	71,958.00
Alther Construction Ltd.	69,914.00
McLean Service & Construction Ltd.	69,900.00
Fekete Construction Co. Ltd.	67,781.00
Harsim Construction Ltd. awarded	**66,800.00**
Jason Construction Ltd.	64.801.00*
DEMOLITION OF A BUILDING, 610 - 7 Avenue S.W., CALGARY. April 22, 1965.	
	Gov't. to pay:
Adby Demolition Co. Ltd. awarded	**1,575.00**
GARAGE AND WAREHOUSE BUILDING, DEPARTMENT OF LANDS AND FORESTS, BLAIRMORE. May 6, 1965.	
Tomasz Strzeskowski (Tom's Construction)	78,750.00
Swanson and Olofson Construction	75,755.00
Getkate Masonry Construction Ltd.	75,194.00
Chronik Construction Ltd. awarded	**73,100.00**
STAGE II, PILOT PLANT, ALBERTA RESEARCH COUNCIL, CLOVER BAR, EDMONTON. May 6, 1965.	
Christensen and Macdonald Construction Ltd.	588,100.00
Laing Construction & Equipment Ltd.	588,000.00
Stuart Olson Ltd.	576,234.00
Poole Construction Ltd. awarded	**568,791.00**
RE-ROOFING OF CARPENTER SHOP, DEPARTMENT OF HIGHWAYS SITE, GRANDE PRAIRIE. May 13, 1965.	
Standard Roofing Co. Ltd.	2,990.00
Northland Roofing & Sheet Metal Ltd.	2,895.00
L. H. Walker Roofing Ltd. awarded	**2,479.00**

CONTRACT TENDERED FOR AND TENDERERS	**AMOUNT BID**
ADDITION TO STEAM LINE, UNIVERSITY OF ALBERTA, EDMONTON. May 13, 1965.	
Canadian Comstock Co. Ltd.	$ 94,458.00
Carse, Anderson Ltd.	90,988.00
Meccon Installations Ltd.	90,200.00
Brown and Root Ltd.	88,275.00
Lockerbie and Hole Western Ltd. awarded	**88,200.00**
SITE PREPARATION AND GRADING, DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS BUILDING SITE, CALGARY. May 20, 1965.	
Brazeau River Constructors Ltd.	66,600.00
Standard-General Construction Ltd.	56,150.00
Gallelli and Sons Co. Ltd.	47,450.00
F. W. Lamb and Sons Ltd.	39,850.00
Paragon Earth Movers Ltd. awarded	**37,850.00**
Shatto Construction Co. Ltd.	35,930.00*
EXTENSION OF GRADING AND RELATED WORK, LANDS AND FORESTS YARD, PEACE RIVER. May 20, 1965.	
North American Road Ltd.	33,300.00
Whissell Construction Ltd.	24,750.00
Fraser and Rice Construction Ltd. awarded	**22,640.00**
Estabrook Construction Ltd.	16,695.00*
EXTENSION OF PAVING AND RELATED WORK, NORTHERN ALBERTA INSTITUTE OF TECHNOLOGY, EDMONTON. May 27, 1965.	
O'Hanlon Paving Ltd.	69,857.00
Everall Construction (Edmonton) Ltd.	69,653.50
W. C. Wells Construction Co. Ltd.	65,937.50
Alberta Concrete Products Co. Ltd. awarded	**59,333.35**
GRADING, GRAVELLING AND RELATED WORK, PROVINCIAL GAOL, PEACE RIVER. May 27, 1965.	
North American Road Ltd.	151,900.00
Park Bros. Ltd. & Estabrook Construction Ltd.	107,150.00
Steffler Construction Ltd.	95,720.00
Poole Engineering Co. Ltd.	87,500.00
Fraser and Rice Construction Ltd.	81,424.00
W. Rosson Construction Ltd.	76,605.00*
Blades Brothers Construction awarded	**74,992.00**

CONTRACT TENDERED FOR AND TENDERERS	**AMOUNT BID**
PROVINCIAL BUILDING, CORONATION. June 3, 1965.	
Greene Construction Co.	$ 257,500.00
Stuart Olson Ltd.	248,893.00
P. W. Graham and Sons Northern Ltd.	247,756.00
Briden Construction Ltd.	246,495.00
W. J. Bennett Contractors Ltd. awarded	**240,571.00**
PAVING AND RELATED WORK, SCHOOL OF AGRICULTURE, OLDS. June 3, 1965.	
Pioneer Paving Ltd.	103,399.00
Gallelli and Sons Co. Ltd.	96,944.00
M. and S. Paving Ltd.	88,277.00
Border Paving Ltd. awarded	**83,486.00**
PAVING AND RELATED WORK, VETERINARY LABORATORY, LETHBRIDGE. June 3, 1965.	
Tollestrup Construction Co. Ltd. awarded	**15,458.95**
STANDARD TYPE BUNKHOUSE, DEPARTMENT OF LANDS AND FORESTS, SLAVE LAKE. June 17, 1965.	
McRae and Associates Construction Ltd.	30,917.00
MacCalder Construction Co. Ltd.	30,700.00
Byrnes and Hall Construction Ltd.	30,600.00
South Bend Structures Ltd. awarded	**24,717.00**
ALTERATIONS TO SECOND FLOOR, PROVINCIAL BUILDING, SPIRIT RIVER. June 17, 1965.	
Buchanan Construction & Engineering Co. Ltd. awarded	**39,921.00**
SUPPLY AND INSTALLATION OF ACOUSTIC TILE AND SUSPENSION SYSTEM TO AGRICULTURAL AND VOCATIONAL COLLEGE, VERMILION. June 17, 1965.	
Triangle Insulations Ltd.	5,958.00
F. Drexel Co. Ltd. awarded	**4,976.00**
FOUR STALL MAINTENANCE GARAGE, CAMROSE. July 8, 1965.	
C. Burrows Construction Limited	59,254.00
Alther Construction Limited	55,986.00
Joslyn & Olsen Contractors Limited	54,465.00
Lance Construction Limited	54,385.00
Briden Construction Limited awarded	**53,350.00**

CONTRACT TENDERED FOR AND TENDERERS	AMOUNT BID
STUCCO FINISH TO PUBLIC WORKS BUILDING, TERRACE BUILDING, EDMONTON. July 8, 1965.	
Fred Blanchard & Son (1963) Limited	$ 7,384.00
Vacon Associates Limited	6,988.00
George R. Byer & Associates Limited awarded	**5,800.00**
FOUR HOUSES, WELFARE CENTRE, GUNN. July 15, 1965.	
S. V. Construction Ltd.	82,978.00
Watson (Tofield) Limited	74,320.00
Rosen Construction Co. Ltd.	69,995.00
Summit Construction Ltd.	69,854.00
Lance Construction Limited	68,584.00
Dornwood Construction Ltd.	67,442.00
Dunn & Peterson Builders Ltd.	64,000.00
South Bend Structures Ltd. awarded	**59,706.00**
SEWER AND WATER EXTENSIONS, PROVINCIAL MUSEUM AND ARCHIVES, EDMONTON. July 15, 1965.	
N. S. Pawliuk & Son Contracting Ltd.	106,414.50
Expert Ditchers Company Limited awarded	**87,552.00**
NEW SMOKESTACK FOR EXISTING POWER PLANT, SOUTHERN ALBERTA INSTITUTE OF TECHNOLOGY, CALGARY. July 15, 1965.	
Canadian Refractories Construction Ltd. awarded	**4,193.00**
MECHANICAL EQUIPMENT INSTALLATION, PROVINCIAL BUILDING, LETHBRIDGE. July 15, 1965.	
Kenwood Engineering Construction Ltd.	59,760.00
Bird Construction Company Limited awarded	**59,673.00**
WATER LINE EXTENSION, STUDENT RESIDENCE PLAYING FIELD, UNIVERSITY OF ALBERTA, EDMONTON. July 15, 1965.	
Okelitch & McGinn Co.	4,273.00
L. F. Wilson Construction Limited awarded	**2,897.00**
ADDITION TO CORE STORAGE BUILDING, OIL AND GAS CONSERVATION BOARD, CALGARY. July 22, 1965.	
Poole Construction Limited	205,300.00
McLean Service & Construction Ltd.	204,890.00
Bird Construction Co. Ltd.	201,288.00
Burns & Dutton Construction (1962) Ltd.	200,000.00
I. W. Campbell Construction Ltd.	199,750.00
J. C. Hughes Contractors Ltd. awarded	**198,993.00**

CONTRACT TENDERED FOR AND TENDERERS	AMOUNT BID
SANITARY SEWER AND WATER LINE EXTENSIONS, LANDS AND FORESTS WAREHOUSE, WHITECOURT. July 22, 1965.	
Arthur A. Voice Construction awarded	$ **11,143.00**
Whissell Enterprises Ltd.	no bid received
HOMES FOR THE AGED, BELVEDERE #3, OTTEWELL #2, ROSSLYN #2, EDMONTON. July 29, 1965.	
Alta-West Construction Ltd.	593,080.00
A. Wheeler Building Ltd.	585,000.00
Harsim Construction Ltd.	579,250.00
Laing Construction & Equipment Ltd. awarded	**566,000.00**
ADMINISTRATION BUILDING, PROVINCIAL GAOL, CALGARY. August 5, 1965.	
Poole Construction Ltd.	798,900.00
Commonwealth Construction Co. Ltd.	756,462.00
Bird Construction Co. Ltd.	744,972.00
Bennett & White Alberta (1963) Ltd.	739,803.00
Burns & Dutton Construction (1962) Ltd. awarded	**737,439.00**
TREASURY BRANCH, BRETON. August 5, 1965.	
Camwil Construction Ltd.	83,500.00
Alther Construction Ltd.	78,618.00
Prism Construction Co. Ltd. awarded	**76,980.00**
Lance Construction Ltd.	75,757.00*
DEMOLITION OF EXISTING BUILDING AND ERECTION AND COMPLETION OF NEW TREASURY BRANCH BUILDING, THREE HILLS. August 5, 1965.	
Greene Construction Company	59,088.00
Jason Construction Limited awarded	**56,511.00**
WATER AND SEWER EXTENSIONS, SOUTHERN ALBERTA INSTITUTE OF TECHNOLOGY, CALGARY. August 5, 1965.	
Poole Construction Limited	114,601.00
Borger Construction Ltd. awarded	**65,342.00**
PAVING AND RELATED WORK, VARIOUS GOVERNMENT INSTITUTIONS, EDMONTON AREA. August 5, 1965.	
Everall Construction Ltd.	108,537.18
Alberta Concrete Products Co. Ltd. awarded	**98,369.70**

CONTRACT TENDERED FOR AND TENDERERS	**AMOUNT BID**
SUPPLY AND INSTALLATION OF CERAMIC TILE, VERMILION SCHOOL OF AGRICULTURE, VERMILION. August 5, 1965.	
Empire Marble & Tile Ltd.	$ 5,700.00
"Bob" Candido's Tile & Terrazzo Co. Ltd.	4,777.00
Reeson Tile & Terrazzo Ltd. awarded	**4,765.00**
Columbia Tile & Terrazzo Ltd.	4,477.00*
ADDITION TO ENGINEERING BUILDING, UNIVERSITY OF ALBERTA, CALGARY. August 12, 1965.	
Bird Construction Company Limited	2,050,000.00
Commonwealth Construction Co. Ltd.	2,020,450.00
Poole Construction Limited	1,998,000.00
Burns & Dutton Construction (1962) Ltd. awarded	**1,989,000.00**
SUPPLY AND ERECTION OF STRUCTURAL STEEL FOR CENTRAL HEATING AND COOLING PLANT, UNIVERSITY OF ALBERTA, CALGARY. August 12, 1965.	
Maloney Steel Crafts Limited	66,968.00
Dominion Bridge Company Limited	59,964.00
Guardian Steel Fabricators Limited awarded	**53,341.00**
REMOVAL OR DEMOLITION AND REMOVAL OF VARIOUS STRUCTURES AT POWER PLANT, SOUTHERN ALBERTA INSTITUTE OF TECHNOLOGY, CALGARY. August 12, 1965.	
Bill Wearmouth Holdings Limited awarded	Gov't. to pay: **7,336.00**
SUPPLY AND INSTALLATION OF FURNACES AT BOW VALLEY LODGES, CALGARY. August 12, 1965.	
Lockerbie & Hole Western Ltd.	24,600.00
Reggin Industries Ltd. awarded	**24,547.00**
Freeze Maxwell Co. Ltd.	21,695.00*
ADDITION TO PROVINCIAL BUILDING, GRANDE PRAIRIE. August 19, 1965.	
Norman Nilsen Construction Ltd.	209,899.00
Fraser & Rice Construction Ltd.	203,300.00
Briden Construction Ltd. awarded	**197,711.00**

CONTRACT TENDERED FOR AND TENDERERS	**AMOUNT BID**
SUPPLY AND ERECTION OF STRUCTURAL STEEL FOR CENTRAL COOLING PLANT, UNIVERSITY OF ALBERTA, EDMONTON. August 19, 1965.	
Gilchrist Engineering (Alberta) Ltd.	35,980.00
Canada Iron Foundries Ltd.	32,024.00
Dominion Bridge Co. Ltd.	31,298.00
A I M Steel Limited	30,942.00
Guardian Steel Fabricators Ltd.	28,960.00
Steel-Weld Machine Co. Ltd. awarded	**28,693.00**
GRADING, GRAVELLING AND RELATED WORK; INSTALLATION OF WATER AND SEWER LINES AT DEPARTMENT OF LANDS AND FORESTS HEADQUARTERS, FORT McMURRAY. August 19, 1965.	
North American Road Limited	$ 56,980.00
Fraser & Rice Construction Ltd.	49,604.00
G. C. McLeod & Company Limited awarded	**38,214.90**
OFFICE, GARAGE AND STORAGE BUILDING, OIL AND GAS CONSERVATION BOARD, EDMONTON. August 19, 1965.	
A. V. Carlson Construction Limited	142,947.00
Harsim Construction Limited	138,600.00
Rendek Construction Limited	136,300.00
Stuart Olson Limited awarded	**128,712.00**
VIVARIUM, UNIVERSITY OF ALBERTA, EDMONTON. August 26, 1965.	
Stuart Olson Ltd.	185,700.00
Forest Construction Ltd.	181,564.00
R. Vollan (Alta.) Ltd.	179,583.00
Norman Nilsen Construction Ltd.	177,990.00
Span Structures & Supplies Ltd.	175,800.00
Prism Construction Co. Ltd.	175,750.00
Alta-West Construction Ltd. awarded	**167,192.00**
100 STUDENT NURSES' RESIDENCE, ALBERTA SCHOOL HOSPITAL, RED DEER. August 26, 1965.	
Laing Construction & Equipment Ltd.	598,155.00
Universal Construction Co. Ltd.	558,586.00
Oland Construction Co. Ltd.	546.600.00
Harsim Construction Ltd. awarded	**527,300.00**

CONTRACT TENDERED FOR AND TENDERERS	**AMOUNT BID**
GRADING, GRAVELLING, PAVING AND RELATED WORK, SOUTHERN ALBERTA INSTITUTE OF TECHNOLOGY, CALGARY. August 26, 1965.	
M. and S. Paving Ltd.	99,488.00
Pioneer Paving Ltd.	85,350.50
Consolidated Concrete Ltd. awarded	**82,055.50**
PAVING AND RELATED WORK, WELFARE CENTRE, GUNN. August 26, 1965.	
Everall Construction (Edmonton) Ltd.	25,605.00
W. C. Wells Construction Co. Ltd. awarded	**23,645.00**
PATIOS, RETAINING WALLS AND RELATED WORK, UNIVERSITY OF ALBERTA, EDMONTON. August 26, 1965.	
Camwil Construction Ltd. $	145,911.00
Parkins Construction Ltd. awarded	**137,979.00**
VETERANS' NURSING HOME AND ASSOCIATED WORKS, EDMONTON. September 2, 1965.	
Poole Construction Ltd.	1,498,400.00
Alta-West Construction Ltd.	1,457,110.00
Laing Construction & Equipment Ltd.	1,397,000.00
Burns & Dutton Construction (1962) Ltd. awarded	**1,386,500.00**
MECHANICAL WORK, ENGINEERING CENTRE, PHASE II, UNIVERSITY OF ALBERTA, CALGARY. September 2, 1965.	
Fred Deeves & Sons Ltd.	817,000.00
Lockerbie & Hole Western Ltd.	731,000.00
Canadian Comstock Co. Ltd.	727,888.00
Waterman-Waterbury Company awarded	**726,700.00**
EIGHT STALL HIGHWAY MAINTENANCE GARAGE, GRANDE PRAIRIE. September 2, 1965.	
Lance Construction Ltd.	98,389.00
Briden Construction Ltd.	89,623.00
D. & B. Building Contractors Ltd. awarded	**84,622.00**
DEMOLITION OF EXISTING BUILDING AND ERECTION AND COMPLETION OF TREASURY BRANCH BUILDING, BOW ISLAND. September 2, 1965.	
F. Wahl Construction Ltd.	66,632.00
D & H Construction Ltd.	64,616.00
Jason Construction Ltd. awarded	**64,298.00**

CONTRACT TENDERED FOR AND TENDERERS	**AMOUNT BID**
HOME FOR THE AGED, CLARESHOLM. September 2, 1965.	
Engineered Homes (Alberta) Ltd.	299,719.75
Bird Construction Co. Ltd. awarded	**293,750.00**
HOME FOR THE AGED, BASHAW. September 2, 1965.	
Engineered Homes (Alberta) Ltd.	309,629.50
Alta-West Construction Ltd.	303,986.00
Bird Construction Co. Ltd.	284,750.00
Greene Construction Co. awarded	**256,135.00**
RESEARCH COUNCIL OF ALBERTA PILOT PLANT, LABORATORY BUILDING, STAGE III, CLOVER BAR. September 2, 1965.	
Forest Construction Ltd.	889,876.00
Norman Nilsen Construction Ltd.	868,878.00
Poole Construction Ltd.	827,764.00
Laing Construction & Equipment Ltd. awarded	**823,750.00**
MECHANICAL CONTRACT, ADDITION TO HEATING PLANT, NORTHERN ALBERTA INSTITUTE OF TECHNOLOGY, EDMONTON. September 16, 1965.	
Burns & Dutton Construction (1962) Ltd. $	190,767.00
Industrial Power Installations Ltd.	189,328.00
Lockerbie & Hole Western Ltd.	168,000.00
Brown & Root Ltd.	165,920.00
Haddow & Maughan Ltd. awarded	**148,500.00**
SUPPLY AND ERECTION OF STRUCTURAL STEEL FOR CENTRAL HEATING AND COOLING PLANT, SOUTHERN ALBERTA INSTITUE OF TECHNOLOGY, CALGARY. September 16, 1965.	
Guardian Steel Fabricators Ltd.	60,500.00
Hectors Ltd.	60,300.00
Dominion Bridge Co. Ltd.	59,794.00
Canada Iron Foundries Ltd. awarded	**59,448.00**
SOUTH COMPLEX, SOUTHERN ALBERTA INSTITUTE OF TECHNOLOGY, CALGARY. September 23, 1965.	
Commonwealth Construction Co. Ltd.	13,121,000.00
The Foundation Co. of Canada Ltd.	13,060,000.00
Poole Construction Ltd. AND Burns & Dutton Construction (1962) Ltd. (A Joint Venture) awarded	**12,625,000.00**

CONTRACT TENDERED FOR AND TENDERERS	**AMOUNT BID**
PROVINCIAL MUSEUM AND ARCHIVES, PHASE I, FOUNDATIONS AND STRUCTURAL FRAME, EDMONTON. September 23, 1965.	
Burns & Dutton Construction (1962) Ltd.	1,635,000.00
Alta-West Construction Ltd.	1,498,852.00
Poole Construction Ltd.	1,498,600.00
Laing Construction & Equipment Ltd. awarded	**1,432,104.00**
SUPPLY AND INSTALLATION OF ONE FREIGHT ELEVATOR, THREE PASSENGER ELEVATORS, TWO DUMBWAITERS AND TWO ESCALATORS, PROVINCIAL MUSEUM and ARCHIVES BUILDING, EDMONTON. September 23, 1965.	
Turnbull Elevator of Canada Ltd.	260,900.00
Otis Elevator Co. Ltd.	163,630.00
Petersen & Cowan Division, Montgomery Elevator Co. Ltd. awarded	**147,570.00**
THREE RESIDENCES FOR DEPARTMENT OF LANDS AND FORESTS, SLAVE LAKE. October 7, 1965.	
McRae & Associates Construction Ltd.	89,000.00
Lance Construction Ltd.	88,788.00
Harsim Construction Ltd. awarded	**87,900.00**
RE-ROOFING ADMINISTRATION BUILDING, LETHBRIDGE. October 7, 1965.	
Charlton & Hill Limited awarded$	**6,990.00**
SIX RESIDENCES FOR DEPARTMENT OF LANDS AND FORESTS, DEPARTMENT OF THE ATTORNEY GENERAL, FORT McMURRAY. October 7, 1965.	
Leo Blais & Son Construction Ltd.	189,560.00
Muttart Industries Western Ltd. awarded	**156,922.00**
RE-STUCCO WORK, SNOW PLOUGH SHED, BONNYVILLE. October 7, 1965.	
Fred Blanchard & Son (1963) Ltd.	2,695.00
George R. Byer & Association Limited awarded	**2,132.00**
REGRINDING TERRAZZO AND NEW TILE WORK AT PROVINCIAL INSTITUTION, BOWDEN. October 7, 1965.	
Flesher Marble and Tile (1962) Limited awarded	**4,370.00**

CONTRACT TENDERED FOR AND TENDERERS	**AMOUNT BID**
BOILER PLANT, PROVINCIAL GAOL, CALGARY. October 14, 1965.	
Brown & Root Ltd.	54,690.00
Lockerbie & Hole Western Ltd.	43,200.00
Fred Deeves & Sons Ltd.	42,742.00
Burns & Dutton Construction (1962) Ltd. awarded	**41,274.00**
GRADING, GRAVELLING, PAVING AND RELATED WORK, LANDS AND FORESTS YARD, SLAVE LAKE. October 14, 1965.	
Fraser & Rice Construction Ltd. awarded	**16,663.00**
REMOVAL OR DEMOLITION AND REMOVAL OF RESIDENCES AND GARAGES, LOTS 13 AND 14, BLOCK 4, OLDS. October 14, 1965.	Gov't. to pay:
Adby Demolition Co. Ltd.	1,725.00
Nor-West Demolition awarded	**840.00**
ADDITION TO HOME FOR THE AGED, CARDSTON. October 21, 1965.	
Jason Construction Ltd.	81,335.00
Dunford Construction Ltd.	55,138.00
Swanson & Olofson Construction awarded	**40,450.00**
CLEARING, GRADING, GRAVELLING, FENCING AND RELATED WORK, LANDS AND FORESTS HEADQUARTERS, BLAIRMORE. October 28, 1965.	
Tollestrup Construction Co. Ltd.	$ 53,060.00
Backguard Construction Co. Ltd.	37,650.00
Brazeau River Constructors Ltd. awarded	**32,940.00**
FOUR STALL MAINTENANCE GARAGE, DEPARTMENT OF HIGHWAYS, PONOKA. October 28, 1965.	
W. J. Bennett Contractors Ltd.	71,231.00
P. W. Graham & Sons Northern Ltd.	68,250.00
Lance Construction Ltd.	67,434.00
Teralta Construction & Supply Ltd.	66,600.00
Norman Nilsen Construction Ltd.	64,178.00
Camwil Construction Ltd.	63,977.00
Dunford Construction Ltd.	61,586.00
Jason Construction Ltd.	60,750.00
Alther Construction Ltd. awarded	**57,493.00**

CONTRACT TENDERED FOR AND TENDERERS	AMOUNT BID
CENTRAL HEATING AND COOLING PLANT, SOUTHERN ALBERTA INSTITUTE OF TECHNOLOGY, CALGARY. November 4, 1965.	
G. M. Gest Contractors Ltd.	1,617,942.00
Canadian Comstock Co. Ltd.	1,594,863.00
Lockerbie & Hole Western Ltd. awarded	**1,586,000.00**
GARAGE AND WAREHOUSE, DEPARTMENT OF LANDS AND FORESTS, FORT McMURRAY. November 4, 1965.	
Norman Nilsen Construction Ltd.	122,675.00
A. V. Carlson Construction Ltd.	119,939.00*
Byrnes & Hall Construction Ltd.	110,900.00
St. Laurent Construction Ltd. awarded	**109,708.00**
CENTRAL HEATING AND COOLING PLANT, UNIVERSITY OF ALBERTA, CALGARY. November 18, 1966.	
Burns & Dutton Construction (1962) Ltd.	2,267,422.00
Brown & Root Ltd.	2,225,325.00
Lockerbie & Hole Western Ltd.	2,196,000.00
Canadian Comstock Co. Ltd. awarded	**2,149,246.00**
WATER WELL DRILLING AND TESTING, WABAMUN PROVINCIAL PARK. November 25, 1965.	
Hi-Rate Drilling Co. Ltd. awarded	**10,575.50**
WATER AND SEWER EXTENSION, BELMONT REHABILITATION CENTRE, OLIVER FARM, EDMONTON. December 2, 1965.	
Petro-Line Construction Co. Ltd.	$ 102,483.52
G. C. McLeod & Co. Ltd.	98,792.06
N. S. Pawliuk & Son Contracting Ltd.	90,734.00
Borger Construction Ltd.	89,462.50
Expert Ditchers Co. Ltd. awarded	**88,278.50**
GLASS MOSAIC CREST, NORTHERN ALBERTA INSTITUTE OF TECHNOLOGY, EDMONTON. December 2, 1965.	
Empire Marble and Tile Ltd.	4,000.00
Columbia Tile & Terrazzo Ltd.	3,954.00
Edmonton Tile & Terrazzo Ltd.	3,590.00
Reeson Tile & Terrazzo Ltd.	2,475.00
Hardy Hardware Ltd. awarded	**1,198.00**

CONTRACT TENDERED FOR AND TENDERERS	**AMOUNT BID**
CENTRAL COOLING PLANT, UNIVERSITY OF ALBERTA, EDMONTON. December 9, 1965.	
Burns & Dutton Construction (1962) Ltd.	1,870,000.00
Brown & Root Ltd.	1,778,300.00
Poole Construction Ltd. awarded	**1,648,247.00**
DEMOLITION OF OLD A.G.T. BUILDING AND RE-GRAVELLING OF VACANT LOTS, RED DEER. December 9, 1965.	Gov't. to pay:
S. K. D. Pressure Concrete Services Ltd.	12,970.00
Bill Wearmouth Holdings Ltd.	9,361.00
Adby Demolition Co. Ltd. awarded	**7,250.00**
FOUR STALL MAINTENANCE GARAGE, DUCHESS. December 16, 1965.	
Arias (Spanish) Construction Ltd.	62,573.00
Jason Construction Ltd.	60,990.00
Briden Construction Ltd.	57,490.00*
Bird Construction Co. Ltd. awarded	**55,617.00**
ENVIRONMENTAL CONTROL LABORATORY, UNIVERSITY OF ALBERTA FARM, EDMONTON. December 16, 1965.	
Rendek Construction Ltd.	166,174.00
Alta-West Construction Ltd.	164,376.00
Briden Construction Ltd.	155,286.00
Camwil Construction Ltd.	154,763.00
W. J. Bennett Contractors Ltd.	152,946.00
Bennett & White Alberta (1963) Ltd.	151,780.00
Norman Nilsen Construction Ltd.	149,718.00
Forest Construction Ltd.	147,769.00
Petrie Engineering Ltd.	147,495.00
Joslyn & Olsen Contractors Ltd.	144,941.00
D. S. Greenfield Construction Ltd. awarded	**138,500.00**
SUPPLY AND INSTALLATION OF DRYWALL TO FOUR HOUSES IN FOOTNER LAKE AND FOUR HOUSES IN HIGH LEVEL. January 6, 1966.	
Bokor Drywall & Painting Ltd.	$ 13,600.00
Gypsum Drywall (Saskatchewan) Ltd. awarded	**13,500.00**
TILE WORK AT ROSEHAVEN INSTITUTE, CAMROSE. January 6, 1966.	
Edmonton Tile & Terrazzo Ltd.	6,980.00
Associated Tile & Terrazzo Ltd.	5,998.00
Adanac Tile & Marble Co. Ltd.	5,700.00
Ranbob Contractors Ltd.	4,806.00
"Bob" Candido's Tile & Terrazzo Co. Ltd. awarded	**4,650.00**

CONTRACT TENDERED FOR AND TENDERERS	AMOUNT BID
TILE WORK AT DEERHOME INSTITUTION, RED DEER. January 6, 1966.	
Associated Tile & Terrazzo Ltd.	1,500.00
"Bob" Candido's Tile & Terrazzo Co. Ltd.	1,277.00
Adanac Tile & Marble Co. Ltd.	1,100.00
H. M. H. Tile Co.	994.00
Ranbob Contractors Ltd. awarded	**965.00**
FOUR STALL GARAGE AND OFFICE BUILDING FOR THE DEPARTMENT OF LANDS AND FORESTS, FOOTNER LAKE. January 27, 1966.	
Solar Construction Co. Ltd.	151,000.00
Alther Construction Ltd.	149,552.00
Norman Nilsen Construction Ltd.	139,777.00
Byrnes & Hall Construction Ltd.	130,701.00
St. Laurent Construction Ltd. awarded	**122,488.00**
PROVINCIAL GAOL, PEACE RIVER. January 27, 1966.	
Laing Construction & Equipment Ltd.	6,230,000.00
Burns & Dutton Construction (1963) Ltd.	5,990,000.00
Poole Construction Ltd.	5,809,000.00
Universal Construction Co. Ltd. awarded	**5,603,598.00**
RIVER INTAKE AND PUMPHOUSE, PROVINCIAL GAOL, PEACE RIVER. January 27, 1966.	
Camwil Construction Ltd.	228,936.00
Norman Nilsen Construction Ltd.	193,611.00
Brown & Root Ltd.	133,800.00
Whissell Enterprises Ltd.	123,600.00
G. C. McLeod & Co. Ltd.	115,871.00
Poole Construction Ltd. awarded	**96,149.00**
ADDITIONS AND ALTERATIONS TO THE HOME FOR THE AGED, WAINWRIGHT. January 27, 1966.	
Jason Construction Ltd. $	81,538.00
Bell & Fountain Contractors Ltd.	75,798.38
M. R. Nason Construction Ltd.	74,995.00
Alta-West Construction Ltd.	73,045.00
Alther Construction Ltd.	71,358.00
Forest Construction Ltd.	67,753.00
R. Holzer Construction awarded	**67,663.00**
CAMPSITE SHELTER AND SKI LODGE, CYPRESS HILLS PROVINCIAL PARK (ELKWATER). February 17, 1966.	
Bird Construction Co. Ltd.	117,480.00
F. Wahl Construction Ltd.	109,945.00
Johnson Construction Co. Ltd.	104,152.00
D & H Construction Ltd. awarded	**100,384.00**

CONTRACT TENDERED FOR AND TENDERERS	**AMOUNT BID**
SUPPLY AND INSTALLATION OF CERAMIC TILE, PUBLIC WORKS BUILDING NO. 1, EDMONTON. February 17, 1966.	
Empire Marble and Tile Ltd.	3,000.00
"Bob" Candido's Tile & Terrazzo Co. Ltd.	2,937.00
Reeson Tile & Terrazzo Ltd.	2,723.00
Columbia Tile & Terrazzo Ltd. awarded	**2,646.00**
OFFICE BUILDING ADDITION, SLAVE LAKE. February 24, 1966.	
Rendek Construction Ltd.	62,128.00
Harsim Construction Ltd.	61,300.00
St. Laurent Construction	60,666.00
Fraser & Rice Construction Ltd.	59,392.00
McRae & Associates Construction Ltd.	59,022.00
Fort Construction Company Ltd.	55,983.00
Joslyn & Olsen Contractors Ltd.	54,997.00
Parkins Construction Ltd. awarded	**54,363.00**
KANANASKIS SCIENCE STATION, UNIVERSITY OF ALBERTA, CALGARY. February 24, 1966.	
I. W. Campbell Construction Ltd.	200,613.00
Keller Construction Ltd.	198,500.00
Jason Construction Ltd.	187,265.00
Bird Construction Co. Ltd. awarded	**178,574.00**
RECEIVING HOME FOR CHILDREN, LETHBRIDGE. February 24, 1966.	
Bird Construction Co. Ltd. $	194,800.00
Kenwood Engineering Construction Ltd.	194,600.00
Arias (Spanish) Construction Ltd. awarded	**194,204.00**
SUPPLY AND INSTALLATION OF SEWER AND WATER LINE, CYPRESS HILLS PROVINCIAL PARK (ELKWATER). March 3, 1966.	
Borger Construction Ltd.	184,290.50
Backguard Construction Co. Ltd.	128,235.00
Petro-Line Construction Co. Ltd.	113,264.72
Medicine Hat Contractors Ltd.	109,131.50
Whissell Enterprises Ltd.	108,984.00
Alberta Utility Builders Ltd.	107,700.00
N. S. Pawliuk & Son Contracting Ltd.	106,863.00
Craig's Welding & Construction awarded	**96,952.50**

CONTRACT TENDERED FOR AND TENDERERS	**AMOUNT BID**
SUPPLY AND INSTALLATION OF WATER & SEWAGE SYSTEM FOR DEPARTMENT OF LANDS AND FORESTS, FOOTNER LAKE. March 3, 1966.	
Borger Construction Ltd.	incomplete
Plains Construction Ltd.	149,173.21
Solar Construction Co. Ltd.	146,431.50
Okelitch & McGinn Co.	131,370.00
N. S. Pawliuk & Son Contracting Ltd. awarded	**126,697.75**
DEPARTMENT OF PUBLIC WORKS AND DEPARTMENT OF HIGHWAYS BUILDING, CALGARY. March 3, 1966.	
Oland Construction Co. Ltd.	1,392,000.00
Laing Construction & Equipment Ltd.	1,350,000.00
Poole Construction Ltd.	1,315,582.00
Sam Hashman & Co. Ltd.	1,276,113.00
Bird Construction Co. Ltd.	1,271,257.00
Burns & Dutton Construction (1962) Ltd.	1,261,000.00
Commonwealth Construction Co. Ltd.	1,253,138.00
Bennett & White Alberta (1963) Ltd. awarded	**1,232,904.00**
REHABILITATION CENTRE, OLIVER. March 17, 1966.	
Universal Construction Co. Ltd.	1,094,830.00
Alta-West Construction Ltd.	1,035,403.00
Christensen and Macdonald Construction Ltd.	1,011,341.00
Bennett & White Alberta (1963) Ltd.	1,009,320.00
Poole Construction Ltd. awarded	**999,918.00**
CARPENTER SHOP, DEPARTMENT OF PUBLIC WORKS, RED DEER. March 17, 1966.	
4 Star Construction Ltd. $	69,700.00
Hornstrom Bros. Construction Ltd.	68,246.00
Ahlstrom Construction Co. Ltd.	66,875.00
Forest Construction Ltd.	65,656.00
Rendek Construction Ltd.	63,925.00
Parkins Construction Ltd.	61,300.00
W. R. Sandquist Construction Ltd.	58,764.00
Harsim Construction Ltd.	55,300.00
Fort Construction Co. Ltd.	53,989.00
Jason Construction Ltd. awarded	**53,500.00**

CONTRACT TENDERED FOR AND TENDERERS	AMOUNT BID
STORAGE AND REPAIR SHOPS FOR THE DEPARTMENT OF HIGHWAYS, SOUTHEAST EDMONTON. March 24, 1966.	
Laing Construction & Equipment Ltd.	2,190,000.00
Universal Construction Co. Ltd.	2,171,812.00
Forest Construction Ltd.	2,163,890.00
Bennett & White Alberta (1963) Ltd.	2,114,107.00
Alta-West Construction Ltd.	2,109,258.00
Christensen and Macdonald Construction Ltd. awarded	**2,060,425.00**
HOME FOR THE AGED, GRANDE PRAIRIE. March 24, 1966.	
Jason Construction Ltd.	342,499.00
Briden Construction Ltd.	329,990.00
Fort Construction Co. Ltd.	329,365.00
Fraser & Rice Construction Ltd.	313,200.00
Newbert Construction & Engineering Ltd.	306,460.00
D & B Building Contractors Ltd. awarded	**293,723.00**
FORESTRY DOCK FOR THE DEPARTMENT OF LANDS AND FORESTS, FOOTNER LAKE. March 31, 1966.	
G. C. McLeod & Company Ltd.	45,900.00
N. S. Pawliuk & Son Contracting Ltd.	33,050.00
M. R. Nason Construction Ltd.	29,950.00
Square M Construction Ltd. and Coleman Collieries Ltd. awarded	**26,000.00**
TUNNEL DISTRIBUTION SYSTEM, SOUTHERN ALBERTA INSTITUTE OF TECHNOLOGY, CALGARY. March 31, 1966.	
Brown & Root Ltd.	843,905.00
Burns & Dutton Construction (1962) Ltd.	689,000.00
Poole Construction Limited	643,288.00
I. W. Campbell Construction Ltd.	624,000.00
Cascade Builders Limited	586,383.00
Bird Construction Company Limited awarded	**579,028.00**
FOUR STALL HIGHWAY MAINTENANCE GARAGE, HINTON. March 31, 1966.	
Fort Construction Co. Ltd. $	68,915.00
Prism Construction Co. Ltd.	62,850.00
Parkins Construction Ltd.	61,800.00
Joslyn & Olsen Contractors Ltd.	60,300.00
Alther Construction Ltd.	60,000.00
Bilodeau & Sons Construction Ltd. awarded	**59,900.00**

CONTRACT TENDERED FOR AND TENDERERS	**AMOUNT BID**
EIGHT STALL HIGHWAY MAINTENANCE GARAGE, LAC LA BICHE. March 31, 1966.	
Cormode & Dickson Construction Ltd.	112,220.00
Coambs & Coambs Construction	108,100.67
Fort Construction Company Limited	104,540.00
Camwil Construction Ltd.	104,222.00
Valere's Construction Co. Ltd.	99,782.00
Rendek Construction Ltd.	99,255.00
P. W. Graham & Sons Northern Ltd. awarded	**94,640.00**
CANCER CLINIC HOSPITAL, EDMONTON. March 31, 1966.	
Laing Construction & Equipment Ltd.	6,049,000.00
Universal Construction Co. Ltd.	5,798,000.00
Bird Construction Company Limited	5,736,963.00
Burns & Dutton Construction (1962) Ltd.	5,716,000.00
Poole Construction Limited	5,578,250.00
Alta-West Construction Ltd. awarded	**5,544,777.00**

TENDERS CALLED ON THE BEHALF OF THE ALBERTA LIQUOR CONTROL BOARD

RESIDENCES FOR ALBERTA LIQUOR CONTROL BOARD AND OTHER GOVERNMENT DEPARTMENTS, FORT McMURRAY. October 7, 1965.	
Leo Blais & Son Construction Ltd.	189,560.00
Muttart Industries Western awarded	**156,922.00**
ALBERTA LIQUOR CONTROL BOARD WAREHOUSE, MAYLAND INDUSTRIAL PARK, CALGARY October 14, 1965.	
Bird Construction Co. Ltd.	1,250,692.00
Bennett & White Alberta (1963) Ltd.	1,233,576.00
Hashman Construction Co. Ltd.	1,227,500.00
Oland Construction Co. Ltd.	1,204,700.00
Commonwealth Construction Co. Ltd. awarded	**1,198,400.00**

PROGRAMME OF CONSTRUCTION

Department of Agriculture

Veterinary Diagnostic Laboratory, Lethbridge

This project, which was illustrated and described in detail in the 1964-65 Annual Report, was completed on June 10, 1965, and consists of two buildings connected by an "A" shaped roof. The major building houses the offices, diagnostic laboratories and animal holding pens while the secondary structure includes the barn, an incinerator and garage accommodation.

Agricultural and Vocational College, Vermilion

Renovations to the Dormitory Kitchen and Dining Room, which were commenced in the year 1963-64, are a continuing project expected to be completed by December, 1966, and are intended to upgrade the food service facility to accommodate the increased enrollment. Alterations were carried on in the kitchen area under the maintenance vote by the College's own maintenance crew. Other work, some of which is now complete, consists of considerable replanning in the main food preparation area, the provision of a free flow servery to provide cafeteria-type service and renovations in the dining hall itself. The last will consist of replacing the existing wood strip flooring with resilient tile, the provision of additional lighting and the installation of crockery storage and self-service counters around the outside walls. A large folding door will also be provided to separate cafeteria dining from an area to be reserved for continued family-style dining. Other renovations in the dormitory will include refinishing in all washrooms, including floor and wall tile work, and refinishing throughout many of the bedroom areas. Extensive rewiring is being carried out, and, generally, the entire building is being upgraded. The basic fabric of the building is still in quite sound condition and these renovations will extend the useful life of the building for a considerable period, and until such time as the development of new residence buildings will replace this structure.

Construction of a Maintenance Building for the College was completed on September 15, 1965. This building was designed and constructed as a simple and economic utility building for the Maintenance Branch of the College. It houses the fire fighting equipment, a machine repair shop with painting room and also a cold store room. Exterior walls are exposed painted concrete blocks with loose fill insulation. Floors are concrete slab on grade; roof construction is glulam beams with purlins and 2" x 4" tongued-and-grooved decking covered with built-up roofing. The building has a self-contained gas fired, forced air heating system.

Department of the Attorney General

Alberta Institute for Girls, Belmont

Construction of the addition to the Institute to accommodate the increased population started on January 25, 1965, and was completed on December 29, 1965. The addition includes the following accommodation:

Main Floor

Laundry
Dining Room
Six Classrooms
Washrooms
Chapel and Vestry
Principal's Office
Swimming Pool

Second Floor

Library
Four Lounges
Two Workrooms
Two Utility Rooms
Ten Single Bedrooms
Four Isolation Bedrooms
Twelve Double Bedrooms
Three Staff Control Rooms
One Interview Room
Two Storage Rooms

The materials employed in the construction of this project are load bearing precast concrete walls, floor and roof slabs, aluminum windows (detention type), exposed and plastered concrete block partitions, acoustic tile and suspended plaster ceilings, vinyl asbestos tile floor covering, glazed concrete block and ceramic mosaic tile to swimming pool. A hot water wall-hung radiation system will supply the heating for the building. The hot water will be generated by passing through a steam shell and tube calorifier and then pumped through the system. A new 300 boiler horsepower natural gas fired low pressure boiler was added to the existing heating plant and will generate the required steam for the calorifier. A separate ventilation system will be used for the classrooms and offices, the indoor swimming pool and the laundry areas. The indoor swimming pool will be heated to maintain an average temperature of 72 degrees. A normal filtration and chlorination system is provided for the swimming pool water supply, while a water treatment plant, including an automatic brine system and water softener, will be installed in the laundry area. The building is equipped throughout with fluorescent lighting, and other electrical systems consist of a clock program and a comprehensive intercommunication and P.A. system.

Administration Building, Provincial Gaol, Calgary

Tenders were received on August 5, 1965, and a contract awarded for the erection of the Administration Wing at the Provincial Gaol, Calgary. Construction is expected to be complete by June, 1966.

The new wing is a reinforced concrete building including approximately 35,000 square feet of floor area. The building is almost totally built of precast load bearing walls, double T's and single T's, precast floor and roof reinforced concrete slabs.

The main floor of the Administration Building has 7,500 square feet which includes the following:

Main entrance
Public lobby
Reception and communication room
Lounge for senior staff
Lounge for junior staff, including kitchenette and dining room
Guards' locker room with a hundred lockers
Waiting room for visitors
General office
Office for the Deputy Warden
Office for the Chief Clerk and secretary
Office for the Chief Warden
Board room
Bursar's office
Elevators, etc.

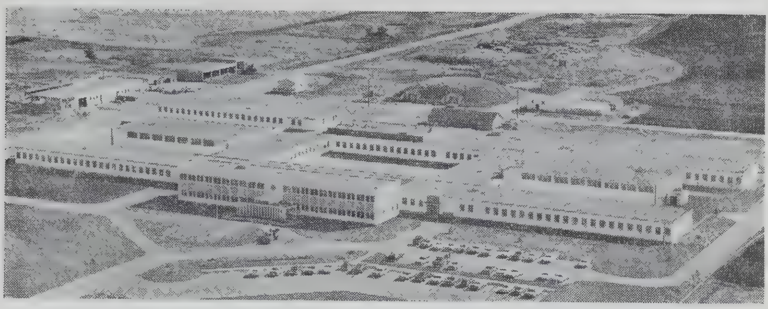
The upper floor includes 7,500 square feet of which the following is included in the security area:

Two hospital wards with bathroom and toilet
Extra room
Examination room
Doctor's room
Working area for inmates
Dentistry room
Dispensary
Orderly room
Lounge
Storage and janitor room

The following are separated from the security area by a vestibule: two private bedrooms, staff bath and toilet, store room, a large staff dormitory and training area, which includes a kitchenette. A nurses' living quarters-bedroom, living room and bath are also provided.

The basement has approximately 7,500 square feet and includes the following accommodation in the security area:

Large multi-denominational chapel seating 200 inmates
Rooms for ministers and priests
Reserve areas for future use
In the non-security area:
Mechanical rooms
Dead file and storage
Strong room
Access door for deliveries



ADMINISTRATION BUILDING, PROVINCIAL GAOL, CALGARY
The Administration Building is the two-storey block in the foreground.

Between the Administration Building which has been described and the corridor linking the two halves of the existing Gaol, there is a main single storey building with basement which has approximately 4,500 square feet on the upper floor and 4,500 square feet on the lower floor. The main floor of the link includes the following accommodation:

Guard room and control room
Canteen
Two security interior rooms
Two standard interior rooms
Two rooms for chaplains
One room for classification officer

On the same floor, with a guard room for control, the visiting area permits 32 inmates to receive visitors. Each place has floor anchored stools, heavy built-in desk, thick plate glass and individual telephone to permit private conversation. One guard has complete visual control of the visitor area.

The basement floor of the building is in two parts. One part for the men has five cells and the other part for women has eleven cells. The partitioning of the main Administration Building is mainly of painted concrete block. Floors are vinyl asbestos. Quarry tile has been used for the entrance and for the bathroom, toilet and locker areas. The building is completely air conditioned. The windows are of sealed units with rubber gaskets set in the precast window opening. The white finish of the exterior precast has been selected in order to fit with the existing white painted buildings.

New Belmont Rehabilitation Centre, Edmonton

Tenders were received on March 17, 1966, and a contract awarded for construction of the New Belmont Rehabilitation Centre, Edmonton. Situated adjacent to the existing Poultry and Dairy Farms at Oliver on the northeast outskirts of the city, the new buildings are expected to be completed by March, 1967. The main building has been designed to accommodate a total of 86 inmates with provision for future expansion to 150 when required. Partly single storey and partly "split level", the building includes the following accommodation:

- Bursar's clothing stores
- Inmates' personal effects storage
- Workshop
- General Storage
- Grocery Storage
- Six Cells
- Administration offices
- Interview rooms
- Library
- Recreation Rooms and Meeting Rooms
- Dining Room and Kitchen
- 10, 12 and 14 bed inmates' dormitories
- 6 bed infirmary
- 5 bed physiotherapy
- Staff living quarters
- Doctor's and Dentist's offices
- Gymnasium with stage

Construction of the building consists of steel columns on concrete foundation walls, long span steel joists with concrete floor slabs at main floor levels, and glued laminated wood beams for roofs; the beams and wood roof deck are exposed on the interior. Exterior finishes are face brick, cedar siding and stucco on concrete block with cedar shingles on pitched roofs. The Chapel is a separate building, having seating for 126 and is constructed in materials similar to the main building.

Fort McMurray

One three bedroom house was constructed at this location for the resident magistrate. This is a standard wood-frame and siding house on concrete basement. Construction commenced on October 20, 1965 and was completed on December 31, 1965.

Provincial Gaol, Peace River

Tenders were received on January 27, 1966, for construction of the Provincial Gaol, Peace River. Located eight miles west of the Town of Peace River, the gaol is on a fine site overlooking the river. The site was formerly known as the "Mission Farm".

The gaol accommodation will consist of 48 individual cells providing a high degree of security, 4 dormitory rooms to accommodate 14 inmates in each, and 48 individual cubicles. In addition, there is an infirmary to accommodate 12 inmates, a modern kitchen and dining room, gymnasium, library, chapel, shoe repair shop, tailor shop and varied other rehabilitation facilities. There are six rooms for overnight accommodation of guards and a suite for a resident nurse. Visiting facilities and administration area adjoin the main entrance. There are six cells isolated from the rest of the gaol for remanded women inmates.

The gaol will have its own water supply and sewage disposal system. Heating shall be by means of gas fired steam boilers. Electrical supply is from the local utility. Stand-by emergency generators are provided. The communication system utilizes phones and radios. Utilities are distributed through the building in an underground service corridor.

The building is laid out on two main corridors. The main control room is at the intersection of the corridor to provide maximum observation with the minimum man power. The corridors divide the building into the following general areas: Administration, Food Services, General Storage, Recreational, Rehabilitation, and sleeping quarters.

The building structure is of reinforced concrete with walls and partitions of reinforced concrete masonry. Interior finishes give due consideration to durability, sanitation, colour and psychological effect.

The following are some of the prime considerations which affected overall design:

(a) Best utilization of site without subtracting from farm land adjoining the institution.

(b) Site drainage.

(c) Integration with existing farm road system.

(d) Maximum visual control of circulation within the building from a central control room.

(e) Operational simplicity by limiting the major areas of the building to a single level.

Construction of the main gaol buildings is expected to be completed by April, 1967.

Tenders were also received on January 27, 1966, and a contract awarded for the construction of a river water intake and pumphouse. Completion of this part of the project is expected by April, 1966.

Department of Education

Southern Alberta Institute of Technology, Calgary

A major construction programme got under way at this Institute in the last year to meet the ever increasing demands of enrollment. To provide the much needed classroom and laboratory space, one of the largest projects handled by the Department of Public Works was designed. This is known as the South Complex, and tenders were received and a contract awarded for the building in September, 1965. Progressive completion dates have been set for the various sections of the complex, ranging from November, 1966, to November, 1967.

The complex will double the size of the S.A.I.T. facilities. About 2,200 students may be accommodated in the new facilities, bringing to 4,500 the student capacity at any one time. With the various short courses, night classes and other extra courses the school will be able to handle about 13,000 students per term.

Construction will be of reinforced concrete and will consist of an eleven storey tower building as well as one three storey and three four storey adjoining blocks, with provision made for future expansion with additional blocks.

A large food service area for students and a common rotunda which mav be used for display purposes will be housed in the centrally-located tower building. The tower building will also house the campus library, staff offices for the entire complex, business technology classrooms and laboratories and the administration offices. It will be served by five elevators, while each block will be served by one elevator.

One adjoining block will provide facilities for the Drafting Department, including its three courses in Drafting Technology. Architectural Technology and Land Surveying Technology. Another block will provide facilities for the Chemistry Department, including its two courses in Chemical Technology and Chemical Research Technology. A third block will house English classrooms, language laboratories, mathematics classrooms, laboratories and team teaching rooms. The fourth block will house Physics classrooms and laboratories, along with a proposed computer-data processing centre.

Exterior wall facing for the Tower is primarily of face brick with vertical accent panels of limestone. The exterior wall facing for the blocks consists of face brick and limestone band courses broken by vertical accent panels of limestone. Wall facing between the blocks and tower are of vertical limestone fins with black granite panels between.

Windows throughout the project are wood framed with aluminum cladding on the exterior, complete with double glazing.

All rooms used for instruction purposes are to be fitted with black-out blinds for audio-visual instruction.

Interior wall finishes are generally painted concrete block for instructional areas; glazed concrete block for corridors. Stairs and some of the corridors will have a plaster finish. Interior walls of offices will consist of movable partitions for flexibility. Main rotunda of the tower will be finished in plaster with some areas in Ontario Rideau Marble.

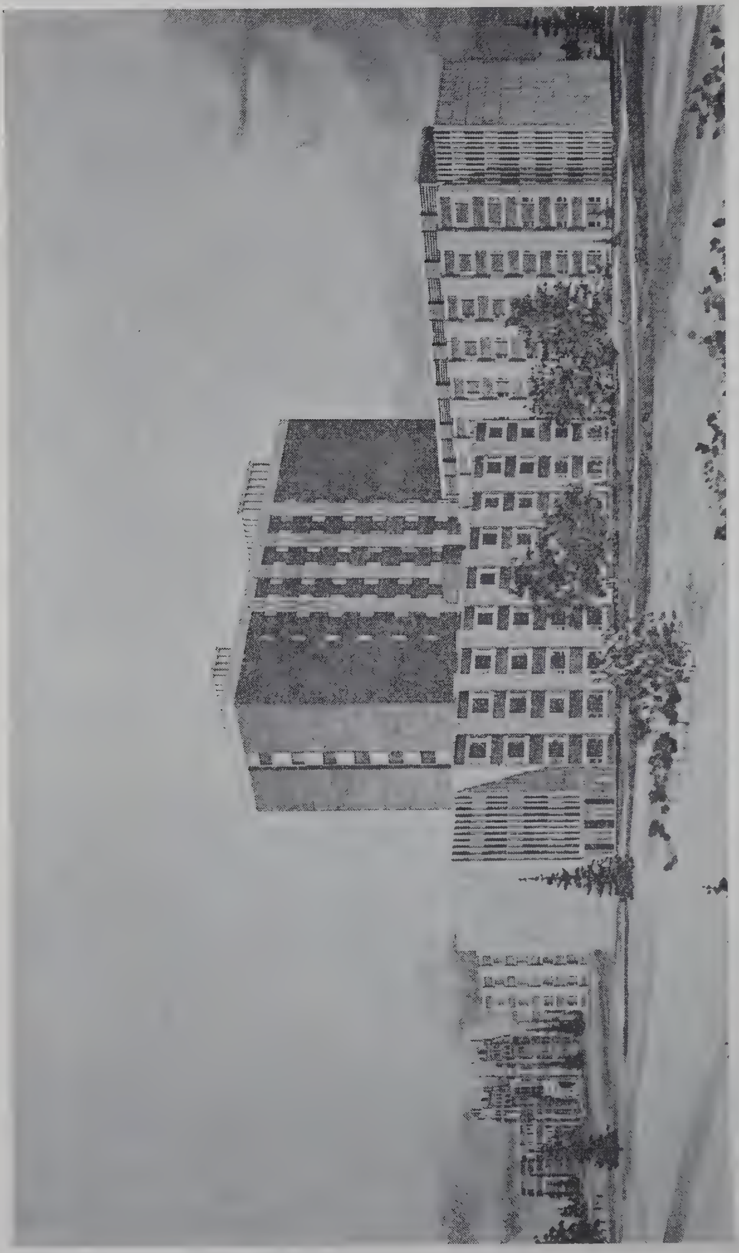
Floor finishes are cast-in-place terrazzo in all entrances, stairs and the main floor of the tower. Rubber tile is used primarily in all instruction areas where resilient floor covering is required. Seamless flooring is used in the bakery and food service area.

The heating system for the South Complex includes a system of convector radiation located on the outside walls under the windows. Heat is supplied to these by mechanically circulated hot water, the temperature of which is varied depending on outdoor temperature.

All classrooms and corridors are fully air conditioned and have individual thermostatic control. Supply air is distributed to these areas by an all-air high velocity single duct system connected to terminal reheat boxes, operating in sequence with the heating system. The source of supply air for each Block in the Complex is a central station air conditioning apparatus consisting of fan section, dehumidifier section, air heating section using glycol coils, filtering section, air intake and return air mixing chamber. Other ventilation systems include toilet exhaust, cafeteria exhaust, kitchen and bakery exhaust, fume cabinet exhaust, reproduction machine exhaust.

Heating equipment and central station air conditioning apparatus are grouped in the Basement of each Block (Sub-Basement for Block "A"). All Blocks are interconnected to Block "A" equipment room through a system of tunnels. Building services, originating from Block "A", such as gas, domestic cold water, domestic hot water, domestic hot water recirculation, steam, pumped condensate return, chilled water supply and return, compressed air, wet standpipe system for fire protection are piped to each Block.

Source of heating and cooling for the Complex will be from a remote Central Heating and Cooling Plant located and interconnected to the Complex through proposed underground distribution Tunnel. Heat is delivered through a 12" high pressure steam main at a rate of 55,504 pounds per hour to handle the present load. Cooling is supplied through 18" chilled water mains carrying 42° water to the Complex at the rate of 2850 g.p.m. to handle the 1,900 Ton load imposed by present development of the South Complex.



SOUTH COMPLEX, SOUTHERN ALBERTA INSTITUTE OF TECHNOLOGY, CALGARY, ALBERTA

Operation of the Complex will be from a Central Control Panel located at the Central Heating and Cooling Plant. The Central Control Panel includes start-stop motor functions, indicating off-normal situations by alarming and print-outs, remote control point temperature adjustment, system scanning, trend recording, intercommunication. Local supervisory panels complete with systems graphic representation, visual and audible alarm indication are provided in each Equipment Room.

While the primary function of the mechanical systems is to provide environmental control of the Complex, these systems will also be used as working models for instructing students at the Institute.

The electrical system for this major building Complex is as follows:

Electrical power is received from the City of Calgary Electric System at 4,160 volts and is fed to two 1,500 KVA pyranol transformers. These transformers are interconnected so that, on a failure of one unit, it can immediately be isolated and the second unit will supply at reduced capacity to the entire Complex.

The main distribution centre is 42 feet long and houses the switchgear that distributes power to the various wings and to mechanical equipment motor loads.

Distribution of power is by means of low impedance bus duct rather than conduit and cable, in order to reduce line losses as much as possible.

The lighting system is supplied with power at 347 volts rather than the normal 120 volts, again in order to reduce line losses and to achieve a large reduction in wire and conduit for supply of power to fixtures.

Lighting fixtures are for the most part fully recessed into the ceilings and have acrylic light control lenses designed to give efficient, and uniform distribution of light over all working surfaces. There are approximately 12,000 fixtures of two types alone required.

Most of the lighting fixtures also incorporate slots through which air is exhausted. The heat from the lights is therefore carried away from the working space which reduces the air conditioning loads and also results in higher lighting fixture efficiency.

The fire detection system has not only manually operated break-glass stations but also incorporates elements to detect smoke or heat in various locations in the building. A graphic panel in the ground floor of the main wing enables an observer to tell at a glance the location of a fire and whether the alarm was initiated by smoke or by heat or by an individual in the area. In addition, a main panel in the central boiler plant will indicate the general location of the fire and send a coded signal to the City Fire Department.

Several conduit systems are also built into the structure to enable future installations without having to break into walls, floors and ceilings. These future systems include television and computer installations as well as the extension of the existing interphone system from the present buildings.

To service the new Complex, as well as other existing buildings, a new central Heating and Cooling Plant was designed as an addition to the existing plant, along with a system of tunnels to distribute the services around the campus. Tenders for the Heating and Cooling Plant were received on November 4, 1965, with completion set for December, 1966. Steam is to be available for the start of the academic session in September, 1966. Separate tenders were also called for the smoke stack, for the structural steel for the plant and for the distribution tunnel.

This addition to the existing heating plant will supply heat for present and future buildings: it will contain refrigeration equipment producing chilled water for airconditioning all campus buildings and it will generate emergency power and peak power to reduce utility demand.

The project, when complete, will include a new building having an operating floor area of about 12,000 square feet, a cooling tower structure and a tunnel distribution system connecting the central plant to all major buildings on the site.

The main building is integrated with the existing boiler plant and comprises the boiler operating area, the refrigeration machine area, electrical distribution area, maintenance shop, washrooms, operating engineer's office and a central control room from which all buildings on the site will eventually be monitored.

The new building is of steel frame and masonry construction. Interior finishes are functional—generally painted concrete block, concrete and painted steel. Exterior treatment is brick with limestone trim to complement and tie in with the existing buildings that surround the new structure.

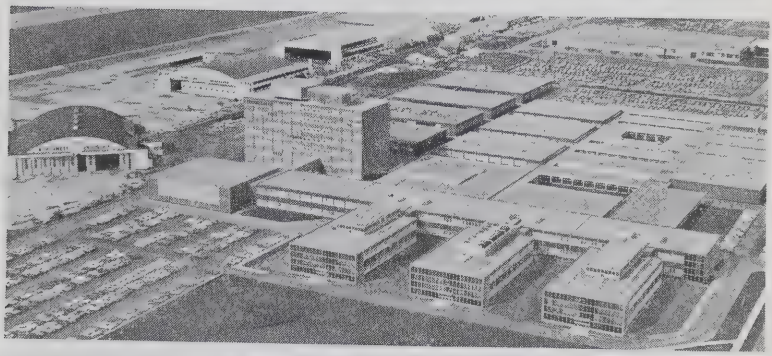
High pressure steam generating equipment installed in the new plant will increase installed plant capacity from 50,000 pounds per hour to 190,000 pounds per hour. 2,500 tons of electrically driven refrigeration provide for air conditioning of existing buildings. Provision has been made for an ultimate capacity of 5,000 tons. The plant has the capability to generate 1,250 K.W. of emergency power or to use this generating capacity to reduce purchased power demand.

The tunnel presently under construction will connect the heating and cooling plant with the new technical education complex, also under construction. The tunnel will also connect to other buildings along the route such as the East block and gymnasium. All major service lines such as steam, chilled water, domestic water, power and communication, etc. except sewer are carried through the tunnel. The tunnel is designed for maintenance personnel only and students will not be permitted in it.

Northern Alberta Institute of Technology, Edmonton

Construction of the Industrial Annex Building commenced on November 4, 1964, and was completed on June 1, 1965. This building, which was described in detail in the 1964-65 Report. accommodates an automotive body shop and related facilities and a Forestry Laboratory growth chamber.

Also described in detail and illustrated in the 1964-65 Report, the Tower Building commenced on December 28, 1964, and was completed in January, 1966. This building is an important addition to the instructional facilities of the Institute and has relieved much of the pressure on the original buildings.



NORTHERN ALBERTA INSTITUTE OF TECHNOLOGY, EDMONTON
The Tower Building is the multi-storey block to the left of the complex.

Department of Health

Foothills Provincial General Hospital, Calgary

The largest building ever undertaken by the Department and one of the largest projects in Western Canada was completed when the Foothills Provincial General Hospital was accepted from the contractor on February 24, 1966. The Hospital is also believed to be the largest in North America started "from scratch" as a complete institution, that is, with no already established administration or physical plant. A complete description of the Hospital was included in the 1963-64 Annual Report. The work which was carried out in the past fiscal year consisted largely of completion of the many finishing trades and final balancing and adjustment to the enormously complex mechanical and electrical systems throughout the building. Much work was also done on the surroundings to the building, with landscaping and paving work to roadways and parking areas being carried out. Opening of the Hospital is anticipated for mid 1966.

Alberta Hospital, Claresholm

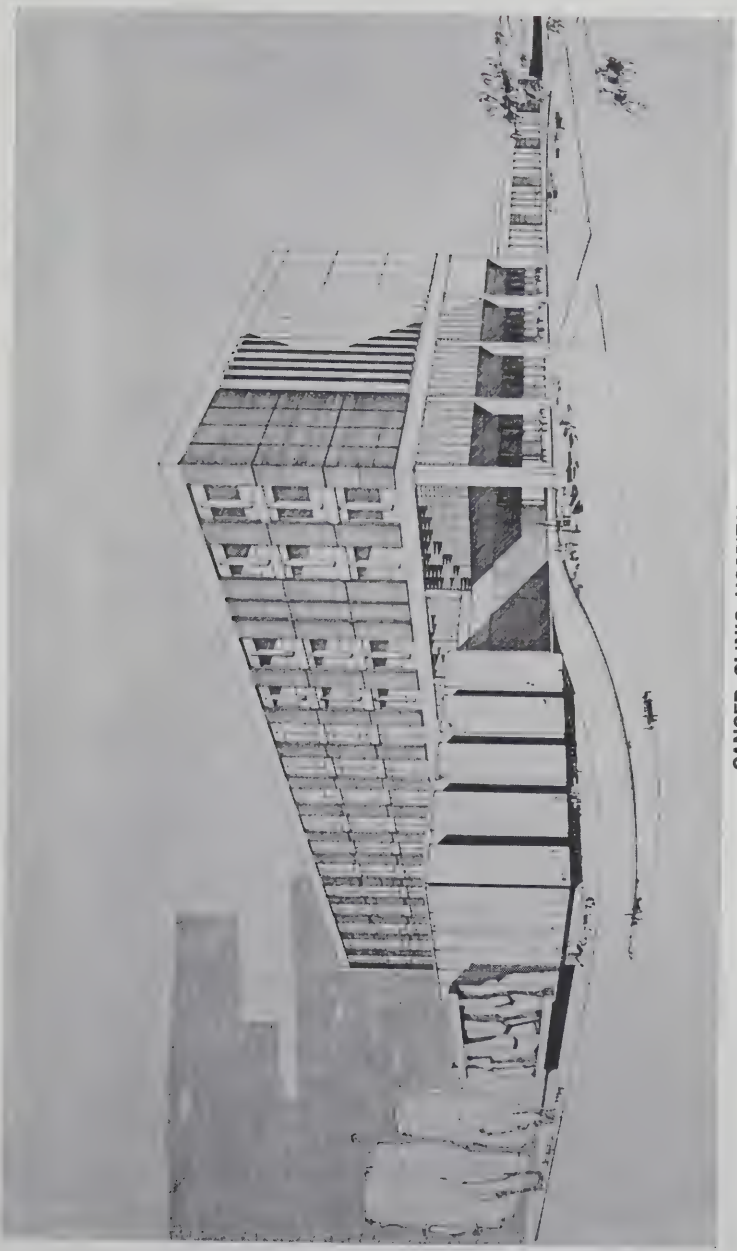
The Administration Building at the Alberta Hospital contains a general office for the hospital administration, together with reception areas and private offices for the Matron, the Assistant Matron, Doctors, the Hospital Bursar and the Accountant. In addition, there is a food servery and cafeteria to seat 100 people, with a private dining area for senior staff. Construction commenced on October 1, 1964, and the building was completed in June, 1965. The building has a wood frame superstructure with face brick and stucco exterior finishes on a concrete full basement. The cafeteria has glulam beams and cedar roof deck, and the entire building has built-up roofing with gravel finish. Wood frame windows are used throughout. The building is connected by a tunnel to the existing tunnel system which shall be used for bed traffic and trucking food, and which contains steam and water services. The mechanical heating and ventilation equipment is located in the basement mechanical room. The building is heated by a hot air system; humidification, filtering and heating of the air is achieved by use of multizone unit and remote preheat wing coil located in the fresh air plenum. Hot air is supplied to the basement and main floor rooms via baseboard diffusers. Air quantities are based on cooling requirements and future refrigeration equipment without additional changes to the ductwork.

Cancer Clinic Hospital, Edmonton

Tenders were received on March 31, 1966, for the construction of a 77 bed Cancer Clinic Hospital to be located on University Avenue adjacent to the Aberhart Memorial Sanatorium and the new Veterans' Nursing Home. Construction started immediately with completion expected in two years.

The purpose of the new hospital and clinic is the replacement and expansion of present quarters and centralization of existing services. The new centre will be particularly adapted to applications of atomic energy in the treatment of cancer. An active treatment centre, the hospital will not be handling terminal cases. It is to be self-governing, but will maintain continual reference with other city hospitals. It is also expected that medical teaching will be extended and improved as a result of the new facilities.

The structure will consist of a central, five storey building intersected at 90 degrees by a long, one storey wing. The superstructure will be a monolithic cast-in-place concrete rib-slab and beam floor and roof system supported on concrete columns. The



CANCER CLINIC HOSPITAL
Edmonton, Alberta

entire structure is to be supported on pile foundations. Interior and exterior finishes were selected to conform with accepted norms for institutions of this nature and to be in harmony with materials and finishes of the surrounding provincial buildings.

Total area of the building is 190,000 square feet and provisions are made for the future addition of two floors, which would increase the floor area by 40,000 square feet and could provide up to 82 additional beds.

A full basement under the structure will house radiotherapy treatment facilities, the physics department, an operating suite, the central supply, housekeeping, storage and staff facilities. The admitting offices, diagnostic x-ray department, out-patient department, staff cafeteria and lecture room are located on the main floor, while the mechanical floor will house heating and air conditioning systems, repair shops, equipment and storage rooms. Facilities for the administration, medical records, statistical department, research laboratory, library and board room will be housed on the second floor, with the third and fourth floors to contain patients' wards for 77 beds and provision for nine additional beds if required prior to future expansion.

In planning the building, particular care was taken to locate the various departments in a logical and efficient arrangement with convenient means of communication for patients and staff. The twenty examining rooms of the out-patient department are grouped around two central work areas in such a way that patient traffic is separated from staff traffic. Similarly, the diagnostic x-ray rooms are laid out around a central work core, making this department one of the most efficient of its kind.

All treatment machines will be housed on the basement floor where advantage is taken of the underground location to aid in the protection of staff and patients from even the smallest radiation hazards. The treatment machines include an 8 MEV Linear Accelerator, one of only two such machines installed in Canada. This and other specialized treatment machines will provide the new institution with the most modern equipment presently available. In addition, many treatment accessories, even special apparatus for research work, will be fabricated under the supervision of physicists in the physics department and a well-equipped machine shop. Space has also been allocated for work with isotopes, for low background radiation scanning, and for a future electron microscope.

Radium for research and insertion will be kept and made ready in a special radium room adjacent to the operating suite. The operating suite is designed with provision for adding one large operating room or two smaller endoscopy rooms as the future needs require. The rooms are designed for minor procedures and radium insertions in connection with radio-therapeutic treatments. They will not be used for major surgery.

Research facilities have been designed for flexibility. This allows for extension and modification of laboratory services for specific research projects without extensive alterations.

Efficiency of operation will be assisted by such features as dumb-waiters, escalators and elevators, a pneumatic tube system for dispatching messages, records and drugs, and versatile intercom, paging and house telephone systems. Food services will be supplied through the central kitchen in the Aberhart Hospital and supplemented by special diets to be prepared in the Cancer Hospital. When completed, the new hospital will provide the medical profession with the most up-to-date facilities for treating cancer and broadening the programmes and methods of research.

Provincial Laboratory of Public Health, Edmonton

Alterations were undertaken to the original Laboratory Building to upgrade the facilities and bring them in line with the 1956 and 1964 additions. The tremendous increase in the services required of the Laboratory have necessitated extensive remodelling throughout all four floors of the building, including the introduction of air conditioning to several critical areas. Additional animal quarters are provided on the third floor and the present freight elevator has been converted to provide passenger-freight service.

Veterans' Nursing Home, Edmonton

Tenders were received on September 2, 1965, and construction commenced on a new Veterans' Nursing Home. The Veterans' Home is intended to accommodate one hundred and fifty veterans who are to be moved from the present hospital at Government House and the Colonel Mewburn Pavilion adjacent to the University of Alberta Hospital.

The single storey complex, it is believed, has many advantages for an institution of this type, in that the patients can be encouraged to walk from one area to another without the hazards of steps or ramps. The most southerly pavilion includes the nursing home facilities, while the north wing contains seventy-five auxiliary hospital beds. The middle pavilion has a lounge and dining room and a large arts and crafts room. The arts and crafts room will contain weaving and woodworking facilities which are considered to be an essential part of the Department of Veterans' Affairs rehabilitation programme.

The building is designed to combine the features of both a nursing home and an auxiliary hospital. Floor to ceiling windows face towards the partially enclosed courtyards which have been designed to complement the pavilions with benches, patios and loggias. From the dining room in the Central Service Building, the patients will be able to look out over University Avenue and see the constant movement of traffic, people, etc., which is necessary for their psychological well-being.

The structure is essentially reinforced concrete with reinforced concrete floor slabs and roof slabs, except in the case of the auxiliary hospital and nursing home pavilions which have steel joist and steel deck roofs. Wherever possible, natural materials were used in order to provide a human atmosphere. Glass sunporches on both ends of the bedroom wings face west over the North Saskatchewan valley and provide the necessary lounge space which these types of patients require; throughout the building, an attempt has been made to provide small, intimate meeting places. The dining room patio includes a small decorative pool and benches like those in the courtyards.

The mechanical system provides complete ventilation and is designed to allow for future air conditioning. Electrical fixtures have been chosen to blend in with the architecture, both inside the building and in the courtyards. A feature of this building is that it is connected by an underground tunnel to the Aberhart Hospital and, when the Aberhart Hospital addition is finished, meals will be trucked directly to the Veterans' Home servery from this tunnel. In the future, this tunnel will be extended to the Cancer Clinic Hospital so that all three buildings will be served from one building.

Also included in this contract is an addition to the Aberhart Memorial Hospital. This addition consists of two portions, a two storey and basement extension to the north wing providing increased accommodation for the diagnostic, administrative and records sections of the hospital and kitchen food storage and preparation functions, and a single level, underground general storage area. The construction is of reinforced concrete and brick and matches the existing hospital.

Construction of all portions of this contract is expected to be complete in September, 1966.

VETERANS' NURSING HOME, EDMONTON

Deerhome Institution, Red Deer

Construction of two new Dormitories (#7 and #8), which started on February 10, 1964, was completed in April, 1965. These are steel framed concrete structures having hollow clay tile interior partitioning and back-up walls to face brick veneers. Roof construction is of reinforced concrete slab with rigid insulation and built - up gravel surfaced roofing. Interior finishes are terrazzo, mosaic ceramic tile and vinyl asbestos tile to floors, terrazzo dados, plaster walls and suspended plaster ceilings. Fenestration consists of sealed glazing units in double hung wood sash and frames with glass block panels. Accommodation provided by these two buildings is four-bed dormitories, single bedrooms, day room, dining rooms, treatment rooms, nurses' stations, bathrooms, utility and linen rooms. The mechanical system incorporates three multizone heating and ventilating units with steam heating coils. A proportional amount of fresh air and return air is mixed and passed through the steam coils to achieve the required temperature for heating the building and then transferred via ductwork to the various areas. Provision has been made for supplying future cooling equipment. Steam supply for the coils is obtained from the main power plant.

Storage Warehouse, Deerhome Institution, Red Deer

Construction of a storage warehouse for Deerhome Institution was commenced in April, 1965, and was completed on August 22, 1965. The 50' x 100' building has a face brick and concrete block superstructure on concrete strip footings and foundation walls. The roof structure of wood deck on glulam beams projects to provide a canopy over a loading dock. Windows are steel sash.

The building is heated by a gas-fired forced air furnace.

Student Nurses' Residence, Red Deer

Construction of a Student Nurses' Residence was started at the Alberta School Hospital in August, 1965, and is expected to be completed in May, 1966. Designed to accommodate 100 nurses, the building is roughly "H" shaped in plan with bedrooms in the wings, and administration and recreation space in the central portion. The Residence is two storeys in height with a full basement which is unfinished at present but is planned for future bedrooms or social areas as the need arises.

Construction of the building is of reinforced concrete, employing a special "form block" for walls and floors; a similar block is used for partitions with plaster finish. Exterior finish is sand lime brick with some bush-hammered concrete while interior finishes include rubber tile floors with carpet in reception areas and plastered ceilings.

NURSES' RESIDENCE—PROVINCIAL TRAINING SCHOOL
Red Deer, Alberta

The building is heated by a hot water heating system utilizing finned radiation in all rooms. The dormitory wings are divided into zones, providing separate temperature control for each exposure. Ventilation is provided for in all bathroom and laundry areas. Each bedroom contains one vanity sink with the plumbing services roughed in for a future sink. Steam is brought into the building as a primary heating medium from the central distribution system.

Department of Highways

Department of Highways Building, Calgary

Tenders were received on March 3, 1966, and construction commenced on a combined Department of Public Works and Department of Highways Building in Calgary to provide much needed new space for workshop and administrative functions for these departments.

The Department of Highways portion of the building has a main floor area of approximately 21,690 square feet. This floor contains private offices, general office area, accounting office, classroom for written examinations, vision cubicles, oral and reaction rooms, public area and washrooms, storage areas, vault and service elevator to the basement floor, and approximately 140 lineal feet of counter. The above areas make up the Motor Vehicles Branch, while the balance of the floor area is taken up by the Department of Highways Safety Division.

The Highways building also has a full basement of the same floor area as the main floor (21,690 square feet). The basement area contains a lunchroom, male and female lockers, staff washrooms, first aid room, mechanical, electrical, telephone and incinerator rooms, with the balance set aside as storage.

This building will consist mostly of pre-cast beams, columns and joists, etc. Wall construction is similar to that in the Public

Works building—concrete block, face brick veneer and smooth stucco fascia. The south elevation, main entrance, will consist largely of pre-cast concrete panels and columns.

Construction is expected to be complete in October, 1966.

Maintenance and Repair Shops, Edmonton East

Development of this new maintenance complex has continued during the past year, with the completion of the eight-stall garage and the salt and paint storage warehouse. The garage, which was completed on June 10, 1965, has eight bays each with its large overhead door, a small office, washroom and mechanical room. Construction is of wood frame with a glulam beam and purlin roof system and a wood deck. Floors are concrete slabs and exterior finish is stucco. The warehouse was completed on August 31, 1965. This building is designed for storage of bulk items such as paint and salt used in highway maintenance. Direct unloading of materials is from a railway spur line, and a series of truck loading docks is provided for shipping. The docks and floor slabs are concrete, the walls of "form block" containing reinforced concrete with a stucco exterior finish, while the roof system is of precast prestressed concrete T's.

The main phase of the development at this site got under way in April, 1966, when work commenced on the Heavy Maintenance and Repair Shops. This facility, which includes parts and general storage and an administration section, is mostly of single storey steel and masonry construction with a maximum of "open" planning for flexibility of operations. In the administrative and staff area, a certain amount of mezzanine areas have been developed, all within the same overall height.

The gross floor area of this building is 177,362 square feet; 162,120 square feet on the main floor level and 15,242 square feet on the mezzanine level. There is no basement. The gross area breaks down as a follows:

Repair shops	97,820 square feet
Parts department	34,344 square feet
Storage, general	16,100 square feet
Staff area	5,292 square feet
Offices and conference rooms	11,940 square feet
Mechanical area	6,000 square feet
Corridors, stairs, etc.	5,066 square feet

There are two basic structural systems. The shop wings (A, B and E) have insulated steel panel walls on a steel frame, while the central areas and storage wings (C, D, F, G) have concrete block bearing walls with brick facing for the main office area. The roof structure for both is of exposed structural steel and steel deck, with the exception of some office areas, etc., which have suspended ceilings of acoustic tile in a T bar system. Floors are concrete slab with a tile applied in office areas, etc. Over the steel deck is a built-up roof.

Sixteen vehicle hoists and other special equipment for the building was pretendered in the previous fiscal year.

Construction of the main building is scheduled for completion in March, 1967, and the presently planned development at the site will be concluded with the erection of Carpentry and Paint & Sign Shops.

Highway Maintenance Garages

Construction continued during the year on garages for housing and servicing road equipment at the following sites:

Hines Creek (four-stall) — commenced January 15, 1965; completed June 23, 1965.

Manning (four-stall) — commenced February 1, 1965; completed June 23, 1065.

Two Hills (four-stall)—commenced January 15, 1965; completed June 10, 1965.

Camrose (four-stall) — commenced August 17, 1965; completed January 19, 1966.

Grande Prairie (eight-stall) — commenced September 28, 1965; completed February 21, 1966.

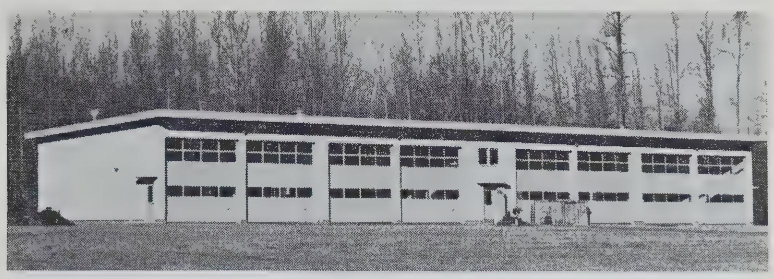
Ponoka (four-stall) — commenced November 8, 1965, completed July 12, 1966.

Hinton (four-stall) — commenced March 17, 1966; expected completion September, 1966.

Duchess (four-stall) — commenced December 9, 1965; expected completion May, 1966.

Lac La Biche (eight-stall) — commenced March 17, 1966; expected completion September, 1966.

These buildings are all typical garages for the storage and maintenance of equipment used by the Highway Maintenance Branch. Each building has four or eight parking bays with overhead doors, an office, a washroom and a mechanical room. Construction is of wood frame with a glulam beam and purlin roof system and a wood deck. Floors are concrete slabs and exterior finish is stucco.



HIGHWAY MAINTENANCE GARAGE, LAC LA BICHE
This is a typical eight stall garage.

Department of Lands and Forests

Forestry Headquarters, Blairmore

Construction commenced on June 1, 1965, on a Maintenance Garage and an Office and Warehouse, and was completed on December 15, 1965. The buildings are typical of those provided for other headquarters sites. The warehouse is basically open warehouse space with an office, washroom, mechanical room and small shop. The garage consists of two large bays and two small bays, each with an overhead door, a small office, washroom and mechanical room. Construction is concrete floor slabs, concrete block walls, glulam beams, purlins and wood deck roof system.

Provincial Park, Cypress Hills

Tenders were called on November 18, 1965, for the supply and installation of sewer and water lines, and the low tender received was considered to be too high. It was therefore rejected and bids were recalled in March, 1965, realizing a substantial saving. A contract was awarded and work is expected to be complete in the late summer.

Tenders were also called on February 17 and a contract awarded for construction of a Campsite Shelter and Ski Lodge. This building is intended to serve as a focal point for campers in the Cypress Hills Park and for the many people who make use of the skiing facilities in this area in the wintertime. The accommodation is intended to provide a lounge and a general purpose area which can be used for such functions as "Moccasin Dances" and other organized recreational functions run under the auspices of the Park Administration.

The nature of the building and its essential functions have dictated the character of design which, it is believed has been achieved with some degree of success. The form of the building together with the choice of the materials reflects the trend which has developed in buildings of this sort in National, Provincial and State Parks across the continent. Extensive use is made of rough

CAMPSITE SHELTER AND SKI LODGE, PROVINCIAL PARK, CYPRESS HILLS

faced brick work and natural finished glued laminated wood beams and wood deck. The roof is finished in rough cedar shakes. Provision is made for the main element of the building to be duplicated should the need arise.

The wood framework of the superstructure and the brick fireplace and chimney stack are carried on a concrete substructure on pile foundations. The building is heated by a gas fired forced air system operating through sub-floor perimeter ducts.

Construction is expected to be complete in July, 1966.

Forestry Headquarters, Footner Lake

A contract was awarded on January 6, 1966, for installation of drywall interior finish to eight houses, four at the headquarters site and four in the townsite of High Level. The balance of the work was carried out by Departments of Public Works and Lands and Forests crews.

Work was also started on January 27, 1966, on a four-stall garage and the headquarters office building, with construction expected to be complete by June, 1966. The garage is the standard plan for the Department of Lands and Forests as described for Blairmore above; however, the superstructure is frame rather than concrete block because of poor soil conditions at this site. Exterior finish is rough cedar siding to match the existing warehouse adjacent.

The office building provides space for the administrative staff for the District. It contains offices for the Superintendent, the Chief Forester, the Fire Control Officer and rangers. A small general office, radio room and a conference room is also provided. The building is 3,416 square feet in area and is of wood frame construction with cedar siding exterior finish. Heating is provided by gas fired forced air.

A dock to serve float-equipped aircraft is also under construction on Footner Lake itself, a short distance from the headquarters site. Tenders for this work were received on March 31, with construction to be completed in May, 1966.

Forestry Headquarters, Fort McMurray

Four staff residences were constructed in the Fort McMurray townsite commencing on October 20 and being completed on December 31, 1965. These are standard three bedroom houses of frame and siding construction on full concrete basements.

Forestry Training School, Hinton

Construction of the addition to the Forest Ranger School commenced February 15, 1965 and was completed on August 31, 1965. This building consists of a partial basement, a lower floor and a main floor. The basement is constructed of reinforced concrete walls with concrete load bearing interior partitions, and accommodates such areas as storage, mechanical, washrooms, "Clean and Soiled" changing rooms. In these areas, the walls are finished in concrete and plaster, painted; the ceilings in concrete with floors in unglazed mosaic tile and color hardened concrete. The main structure is of wood frame with vertical cedar siding and asbestos board feature panels below the main and lower floor windows. The roof is of trussed rafters with plywood sheathing and asphalt shingles. The lower floor accommodates bedrooms, storage rooms, a photogrammetry lab, living quarters, library-reading room and washroom, while the main floor accommodates classrooms, offices, storage, a training aid room and forest biology laboratory. Interior finishes include vinyl asbestos and lino tile floors, drywall walls, acoustic tile, and drywall ceilings. Windows consist of sealed glaz-

FORESTRY TRAINING SCHOOL, HINTON

ing units set in double-hung wood sash and frames. The heating consists of gas fired hot air supply and ventilating system via ductwork throughout the basement, while the upper building periphery is heated by wall-hung fin vectors and unit heaters using hot water.

Forestry Headquarters, Peace River

Construction started on February 8, 1965, of a Warehouse and Four-Stall Garage, and was completed in October, 1965. These buildings are based on typical service garage and warehouse plans as done at other Lands and Forests sites, but for this location, the buildings were brought together with a common wall.

Forestry Headquarters, Slave Lake

Construction of an addition to the headquarters office building commenced on February 24, 1966 and is expected to be complete in July, 1966. The 1500 square foot addition consists of a full concrete basement containing offices, toilets and furnace room, and the frame and wood siding superstructure includes a general office and additional private offices. Interior finishes are plaster and resilient floor tile. The heating system is propane fired forced air and plumbing is served by a 1,500 gallon water tank and septic tank.

Other construction at this headquarters included a standard bunkhouse and three four-bedroom staff residences. The bunkhouse, completed on September 30, 1965 is 1440 square feet in area and is of wood frame and siding construction with a flat roof, on concrete pile foundations and grade beams. Interior finish is drywall. Accommodation is provided for ten men in double bedrooms and the facilities include a lounge, a dining room and kitchen, washroom with shower and a laundry room. Heating is by gas fired forced air furnace.

The staff houses are standard four-bedroom units on slab-on-grade foundations, and were completed on December 31, 1965. Single car garages were also provided.

Department of the Provincial Secretary

Provincial Museum & Archives, Edmonton

Work commenced in September 1965 on the Province's major Canadian Centennial commemorative project when a contract was awarded for the construction of the foundations and main structural frame of the Provincial Museum and Archives Building in Edmonton.

The basic objective of the project is to establish a free public museum which will portray and preserve the natural and human history of Alberta and provide related educational services. The object of the archives is to assemble and preserve significant historical documentary materials of Alberta.

In 1962 a Museum Consultant was appointed to formulate a policy and establish the activities which are to be housed within the facilities. Based on these findings, a detailed programme of accommodation was provided.

It was recognized that a project of this significance should be carried out on a level of high quality, architecturally as well as functionally. Therefore the former site of Government House in Edmonton was chosen. This 13½ acre site is adjacent to natural surroundings, close to public transportation, has a commanding view of the river valley, is free from natural hazards and has ample room for parking and exterior displays. The site also allows for extensive future expansion of both museum and archives, and has the additional value of being of historical interest itself.

It was decided to maintain the old mansion, currently being used as a veterans' hospital, as part of the museum. The building is physically sound and is one of a few dignified older pieces of architecture in Alberta. Some interior remodelling may have to be done, dependent on the ultimate use to which the mansion will be put.

To clear the way for planning, extensive work was carried out in the form of soil tests, sub-surface condition tests, survey and photography. Investigations also had to be made as to the capacity of services available to the site.

A detailed study of the programme of accommodation provided by the museum consultant of the Provincial Secretary's Department was initiated by the Department of Public Works. The functions and inter-relationship of the various departments of the museum were clarified and from here a traffic pattern of public and staff movements was developed. Exhibition areas can be utilized in conjunction with the public facilities, which include an auditorium, cafeteria and lecture rooms. These functions may also be used independently.

Personnel from the Provincial Secretary's Department and the Department of Public Works went on a fact-finding tour of museums in Canada and the Eastern United States. Detailed information was gathered and museum people interviewed provided much valuable information from their own experiences in building up and running a museum.

Based on this preliminary analysis, an architectural concept was developed. It was agreed that the greatest attempt should be made to preserve the dignity and serenity of the site and keep as many as possible of the present trees and plantings intact. The solution to this was to bring the visitor directly to the heart of the site before entering any building. With the main entrance facing a small plaza, which in turn is defined by the buildings, a degree of intimacy and friendliness is brought about.

The main museum complex has been kept in one and two storey masses with possibility for future horizontal expansion; the archives building at one storey, with future additions vertically.

Architectural treatment, both externally and internally, reflects a concern for clarity and the balance of masses and proportions. A sense of scale has been sought with the effect of light and shadow and applications of various textures. The use of sculpture and relief work serves the same purpose, as well as a means of preserving and recording visual images relating to the history of Alberta.

Mr. Luke Lindoe of Medicine Hat, a former instructor at the Alberta College of Art, Calgary, has been commissioned to execute a large relief in stone. Theme of the work is based on the Indian writings found in the Writing-On-Stone Provincial Park in Southern Alberta. It will cover five panels, 17 x 24 feet, and will be carved in Tyndall stone. The relief work will be placed on the south wall of the museum auditorium.

Mr. Olle Holmsten, an instructor at the Alberta College of Art, has been commissioned to do five pieces. Included is a large fountain piece. The work, sixteen feet high, will stand in a reflecting pool on the museum grounds. The main concrete structure will carry four bronze reliefs depicting the story of man's quest for knowledge.

Other works by Mr. Holmsten will include a five foot seated figure in bronze. This will be placed on the terrace near the main entrance. A figure group in cast stone, seven feet high, is to stand at the north side of the complex, facing 102nd Avenue. In addition, two bronze reliefs depicting human and natural history are to be done for the east and west sides of the complex. These will be eight by sixteen feet.

Negotiations have been carried out with the city of Edmonton, in order that slopes on the South end of the site may be developed as a terraced garden. This was done because extensive landscaping is desirable to bring the whole area into use for public and museum functions.

An enthusiastic programme of objectives and displays has been undertaken by the Museums Branch Department of the Provincial Secretary for Alberta's Official Confederation Memorial Project.

The main purpose of the establishment will be to increase public knowledge, wise use and enjoyment of the province's natural and social heritage. Display galleries are being planned and historical

"THE STORY TELLER"
The sketch model of free-standing bronze by Olle Holmsten.

objects, documents and natural history specimens are being collected. Through displays arranged in story sequence, the history of trades, professions, daily lives, creative and religious activities, and regional stories will be presented. The archives will contain collections and arrangements of documentary materials on the history of Alberta.

Besides the expected displays featuring Indian artifacts, exploration, fur trade, settlement and agriculture, the museum will also show several aspects of early industry and commerce.

Daily life in the home and the community is to be portrayed. A special room will highlight the special features of the many ethnic groups in the province. Religious life, creative activities, prominent people, communities, regions, military organizations and firearms will all be subjects for displays.

Extensive exhibits of Alberta's history in the field of communications, transportation, government, politics and organizations have also been planned.

A series of reconstructed rooms, shops and offices will cover a wide area of interest. School rooms, business and professional offices, a settler's cabin, blacksmith shop, saddlery shop, movie theatre, newspaper office, and period living room, bedroom and kitchen displays, plus several others will be featured in this area.

Natural history displays will provide extensive coverage with collections and information on rocks, fossils, insects, birds, mammals, minerals and plants. Field collections and taxidermy are currently being carried out by the Museum Branch staff.

Materials to be housed in the archives will provide documented history of the province. Government records, political papers, photographs, speeches, surveys, diaries, maps, writings, newspapers, society records, minute books, microfilms and a long list of other historical items will provide an excellent source of information to students, as well as the general public.

The Complex has a total floor area of 245,000 square feet including basement storage and workshop and mechanical areas.

Construction is basically of reinforced concrete and long span steel joists for some second floor areas and the entire roof. The building will be faced entirely with natural stone in a variety of textures. The complete building will be fully air conditioned and the critical requirements of the museum displays and archives storage will necessitate extensive use of intricate atmosphere control. The electrical requirements of the building are also highly complex. Separate contracts were awarded for sewer and water extensions and for elevators.

It is expected that tenders for the balance of the contract will be called early in the next fiscal year.

PROVINCIAL MUSEUM AND ARCHIVES, EDMONTON

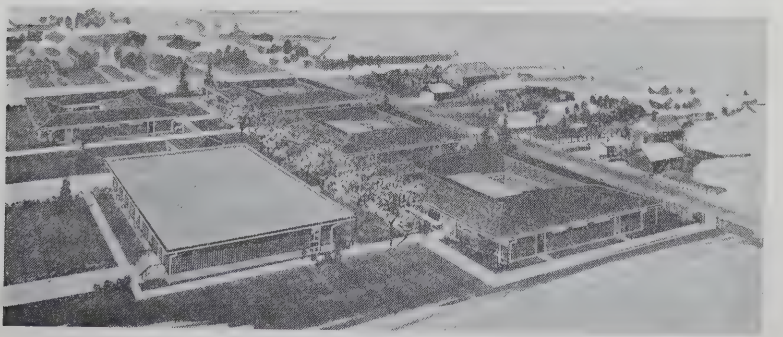
Department of Public Welfare

The programme of construction of Homes for the Aged continued this year at the following locations:

Bashaw
Calgary—Elbow Valley
Cardston
Claresholm
Edmonton—Belvedere #3
    Ottewell #2
    Rosslyn #2
Grande Prairie
Wainwright

Woodside Home, Edmonton

Two ten-girl cottages for unwed mothers, the first of a complex of four cottages, and a double garage, were started September 15, 1964, on a site at 133rd Avenue and 101st Street. Construction was completed on July 19, 1965. The cottage unit contains eight single bedrooms, one double bedroom with common living, dining and recreation rooms, kitchen and laundry room. Other facilities include a suite for the Housemother and her assistant, an office and storage for girls' clothing and linen. A feature of the building is the interior court which provides outdoor living for the residents. Construction is wood frame with a pitched roof surfaced with cedar shingles. Exterior wall cladding is vertical V-joint and diagonal bevelled cedar siding with accent panels of cement asbestos. Interior finish is drywall, and accent panels of natural woods and masonite wood grain are used in different areas; ceilings are generally drywall with some areas using acoustic tile; the floor in the living, dining and recreation room is hardwood with all other floors of resilient tile. Windows are wood framed with sealed units in fixed and opening sashes. Heating is by a gas-fired forced air furnace. Exhaust ventilation is provided in all washrooms. Lighting is incandescent throughout.



WOODSIDE HOME, EDMONTON, ALBERTA

The two-car garage is wood framed throughout on a reinforced concrete foundation; the roof is similar to the cottages. Enclosed storage is provided at one end of the garage for vegetables and a small work area for the maintenance staff.

Welfare Centre, Gunn

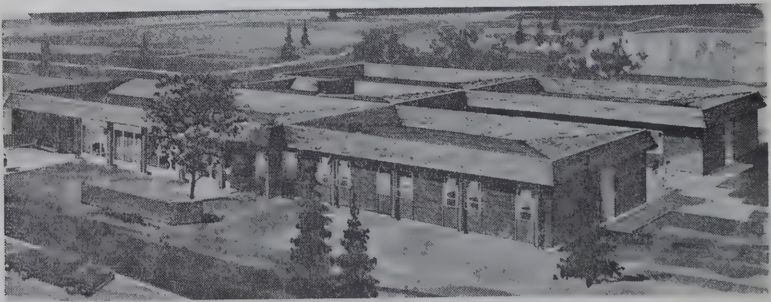
Construction of four six-man houses was commenced on August 15, 1965, and was completed on October 1, 1965, thus continuing development of a new eight-house complex started last year. The houses contain six single bedrooms and a common sitting room and construction is wood framed throughout on reinforced concrete slab foundation, wood framed pitched roof construction surfaced with plywood sheathing and asphalt shingles. Exterior wall cladding is stucco, vertical V-joint siding and plywood panels. Interior finish is plaster on walls and ceilings; floor covering is vinyl asbestos.

Receiving Home for Children, Lethbridge

Tenders were called on February 24, 1966, and a contract awarded for the construction of a Receiving Home for Children in Lethbridge. Completion of the building is expected in September, 1966.

The facilities have been planned to meet a broad variety of situations as the children admitted to the home have usually been recently, and, in many cases, suddenly separated from their own homes and families. The total structure of the home has been planned to meet the diverse needs of children who are to be admitted. Its program, child care and casework services, as well as staff training and supervision, are designed to assist these children to cope with their difficulties and make preparation for adjustment to more satisfactory living arrangements.

Construction of the home is of brick, with trussed roofs finished in hand-split cedar shakes. The one-storey structure will accommodate 22 children. Facilities provided include a nursery, a suite for



RECEIVING HOME FOR CHILDREN, LETHBRIDGE

the houseparents, a room for relief staff and offices for administration and social service work.

The 90' x 120' building is designed around an interior courtyard and a central dining room, living room and playroom. This central area divides the girls' and boys' quarters. Administration, staff and kitchen areas are located in the south portion of the building. The north end of the property is open and will be landscaped for playground use. The home is heated by three gas-fired furnaces in different locations supplying warm air through sub-floor perimeter ducts. The kitchen, which is planned to provide cafeteria-type service, includes a walk-in cold room. A laundry room is fitted with two pairs of heavy duty washers and driers.

Department of Public Works

Department of Public Works Building, Calgary

Tenders were received on March 3, 1966 and construction commenced on a combined Department of Public Works and Department of Highways Building in Calgary, to provide much needed new space for workshop and administrative functions for these departments.

The Department of Public Works portion of the building has a shop floor area of approximately 15,000 square feet. Included in the shop area are carpenter, paint, plumbing, electrical and sheet metal shops, a receiving and loading area, and a storage area designed to allow future expansion to the sheet metal shop.

The shop area has a central corridor leading to the service wing which has a floor area of some 2500 square feet and contains a locker room, wash room, lunch room and storage area. The storage area is also adaptable to future office space. The service wing is connected to the maintenance shop with an area of 2900 square feet. This shop provides all the facilities necessary for the repair and storage of implements and tools. Above the service area is a mezzanine floor of approximately 2550 square feet which provides office space.

The building also includes a covered open-fronted shed and an enclosed paved yard, the combined area of which is about 9700 square feet. The shed provides storage for all shop areas and the paved yard provides protected parking and storage for vehicles and equipment.

The building has a concrete floor, and walls are concrete block and textured face brick on concrete grade beams on pile foundations. The smooth stucco fascia matches the Highways portion of the building. Roof construction is a cedar deck on steel joists.

Construction is expected to be complete in October, 1966.

Provincial Building, Coronation

Tenders were received on May 27, 1965, and construction commenced on a new Provincial Building at Coronation. The new building is a two-storey masonry and reinforced concrete structure with a curtain wall façade, providing a total of 15,337 square feet gross floor space including the full basement area.

The main floor houses the Treasury Branch and the Liquor Store, while the second floor is occupied by the Department of Agriculture, the Department of Highways and the Department of the Attorney General.

Half the basement area is required by the Treasury Branch and the mechanical room, while 2,500 square feet are provided for future expansion.

The first and second floors are fully air conditioned. Heating is provided by a forced hot air system.

The contract was completed on January 11, 1966.

Provincial Building, Spirit River

Work commenced on June 17, 1965, on completion of the second floor of the Spirit River Provincial Building. The original contract, which was described in the previous Annual Report, included the basic construction of the upper floor and this later contract was for fitting out the space for occupancy by the Department of Agriculture. Partitions, some partly glazed, are of wood and drywall construction. Flooring is rubber tile.

Work was completed on December 6, 1965.

Carpenter Shop, Alberta Hospital, Ponoka

Tenders were received on February 25, 1965, for the Carpenter Shop and construction was completed on September 22, 1965. This building has a total area of 9,600 square feet and provides for the following areas: the north shop area, which includes two offices, hardware storage and an electrical shop; the south shop area, which includes the tinshop, plumbing shop, lunchroom and janitor's room. The future occupancy is estimated to be as high as 35 to 40 men. The main building construction is slab-on-grade, lightweight concrete block, laminated wood roof supported by steel joists, drywall partitions and wood sash windows. Heating and ventilation is provided by gas-fired furnaces with warm air distribution through overhead and underfloor duct systems, with special provision for make-up air in the welding shop. Illumination is primarily by fluorescent lighting.

Carpenter Shop, Red Deer

Work commenced on March 17, 1966, on a new Carpenter Shop for the Department's Maintenance Branch at Red Deer. Construction is expected to be complete by July 15, 1966.

The building is 5,252 square feet in area on one level, and is of concrete block construction with a flat cedar roof deck, and a reinforced concrete floor slab.

Treasury Branches

Bow Island

Construction of the Treasury Branch building at Bow Island was started on September 15, 1965, and completed December 6, 1965. The building, which is of rectangular shape, one-storey high, provides accommodation for a vault, manager's office, vestibule, janitor, stairway, a work area and public space, while the part basement contains a vault, staff room, mechanical room and washrooms. The building has a reinforced concrete floor slab-on-grade, beams and piles, and beam and slab over the basement area, with exterior and interior walls of exposed concrete block. Roof construction is flat—of tongued and grooved cedar decking, supported by glu-laminated beams finished with a built-up gravel surfaced roofing. Front elevation features wood framed sealed window units, aluminum glazed entrance doors and sidelights, with coloured accent panels. Interior finishes consist of exposed cedar decking, plaster and acoustic tile to ceilings and painted block walls, and plaster to walls. Floor finish is vinyl asbestos throughout. The building is air conditioned and heated by a gas-fired forced air furnace through perimeter ducts in floor slab. Exhaust ventilation is provided in all washrooms. Lighting is both incandescent and fluorescent.

Breton

Construction of the Treasury Branch building at Breton was started on August 5, 1965, and completed on February 8, 1966. The building, located on a corner lot, is one-storey high and provides accommodation on the main floor for the public space, staff work area, manager's office, vault and janitor. The partial basement has a second vault, mechanical room and staff lunchroom and washrooms.

The building has a reinforced concrete floor slab-on-grade and concrete joists over the basement area, while foundations are concrete walls on strip footings. Superstructure is of concrete block with face brick on the street façades and wood framed windows. The roof structure is of glulam beams with exposed cedar deck. Interior wall finish is plaster with accents of face brick in the public space and wood panelling in the manager's office. Floors are vinyl asbestos tile throughout.

The building is fully air conditioned and heated and cooled air is distributed through perimeter subfloor ducts. Lighting is by both incandescent and fluorescent fixtures.

Three Hills

Construction of the Treasury Branch at Three Hills was started on September 1, 1965, and completion is expected early in the coming fiscal year. This branch is identical to the one at Bow Island described above.

University of Alberta

Biological Sciences Complex, University of Alberta, Calgary

Construction was completed on the Biological Sciences Complex on August 2, 1965. This project was described in detail in the Annual Report for 1963-64. The complex consists of a Tower Building six floors high with single floor buildings adjacent and connected to the Tower Building. These adjacent buildings are the Lecture Theatre, Lobby, Museum, Library and reading rooms, and four individual seminar rooms. The Tower Building provides accommodation for research laboratories and classroom facilities for all branches of the Biological Sciences such as Chemistry, Geology, Zoology, Physics, Biochemistry, etc. On each floor, office spaces and storage spaces are included.

A large amount of bench work is required in the laboratories of this building, and a separate tender was called and a contract awarded on November 16, 1964, for this phase of the work.

Calgary Hall, University of Alberta, Calgary

Construction of Calgary Hall was completed on February 22, 1966. This building provides facilities for the Departments of English, Classics, Drama, Music, Language, Philosophy and Geography, and was described in detail in the previous Annual Report. The site of the building is in the heart of the campus immediately southwest of the new Library and to the east of the Gymnasium. The building has provision for additional floors and for future expansion laterally to form an enclosed courtyard in conjunction with the Library.

Central Heating and Cooling Plant, University of Alberta, Calgary

Begun in November, 1965, the Central Heating and Cooling Plant for the University of Alberta, Calgary, is scheduled for completion at the end of January, 1967.

It contains three gas-fired boilers for producing High Temperature Hot Water which is to be pumped around the Campus to provide heating for all University buildings. The water will be supplied at 415° F., returning at 265° F. at a system pressure of 350 psig. The three boilers have a combined output capacity of 225 million BTU/hr., which will be adequate to handle the needs of the University until 1970.

CENTRAL HEATING AND COOLING PLANT
University of Alberta, Calgary

The plant also contains two electrically driven refrigeration machines for producing chilled water which is to be pumped around the Campus to provide cooling for air conditioning in all University buildings. The water will be supplied at 40° F., returning at 55° F., at a system pressure of 150 psig. The two machines have a combined cooling capacity equivalent to melting 4,000 tons of ice in twenty-four hours. This will be sufficient to handle the University until 1970.

Housed in the Main Control Room of the Plant, is a Central Monitoring and Supervisory Data Centre which keeps constant watch on the functioning of all vital utilities and equipment located in the various buildings. The Centre automatically and continuously scans the status of all points connected to it, sounding an alarm and printing out a report whenever a malfunction or abnormality occurs. The Centre can also be called upon to review and print out the status of all points or selected points as desired.

The Control Room also contains the Central Fire Alarm Panel for the Campus so that location of a fire can be reported to the Fire Department while the trucks are responding to the call.

Both the Heating Plant and the Cooling Plant are arranged for almost unlimited expansion. The main headers in the basement are arranged to serve four main trunk service tunnels, two to the east and two to the west. One of the four tunnels is presently being connected.

Underground Utilities Distribution System

To coincide with the completion of the Central Heating and Cooling plant, a system of distribution of High Temperature Hot Water and Chilled Water, water for irrigation, natural gas, electric power and communications, is being planned to connect all present and future buildings to the Central Heating and Cooling Plant. All the utilities are to be housed in a concrete tunnel which allows for inspection, maintenance, modifications and future service connections with a minimum of disturbance to the landscaped and paved areas on the Campus.

The first phase will contain over a mile and a half of main tunnel, short service tunnels to buildings and concrete underground equipment vaults adjacent to the buildings being served.

Equipment for utilizing the High Temperature Hot Water and converting it into normal temperature hot water or low pressure steam for heating, is contained within the building equipment vaults. This will prevent the introduction of a high pressure system into any occupied building.

The tunnel and piping system is designed to form a series of loops and sub-loops so that any portion of the piping may be shut off for service or connection of future buildings without interrupting service to any of the other buildings. The portions to be constructed in next year's program will not complete any of the loops. Most of the loops will be completed in the second phase, scheduled for 1967.

Bow River Cooling Water System

To provide cooling water for the refrigeration machines in the Central Heating and Cooling Plant of the University, and water for irrigation, a pumping station on the banks of the Bow River and a pipeline from the river to the Central Heating and Cooling Plant will be installed in the next fiscal year. In addition to its primary function of serving the University, it will provide the same services to the Foothills Provincial General Hospital and the Department of Highways and Department of Public Works properties west of 37th Street N.W.

Two electrically driven pumps, with a capacity of approximately 5,000 Imperial Gallons per Minute, are to be installed. This will be adequate to take care of University requirements until approximately 1975. Future pumping capacity can be increased to approximately 9,000 Imperial Gallons per Minute, calculated to be sufficient for the maximum predicted growth of the University and the Foothills Hospital property.

Since the need for irrigation of lawns and shrubbery is a function of temperature similar to that for air conditioning, the water used for cooling the chillers will be approximately equal to the irrigation load, thus the dual use of the water is the key to the economy of the system.

Engineering Centre, Stage II, University of Alberta, Calgary

Construction commenced on the second phase of the Engineering Centre on August 12, 1965, and is expected to be completed by September 1, 1966. Located north of the existing Civil Engineering

Building, the original development plan for the whole Engineering Centre which was approved by the Board of Governors has been followed as closely as possible.

In the Bridge Wing, which connects the existing Civil Wing with the new portion, will be located lecture theatres and a student lounge. The Chemical Wing will house teaching facilities, research laboratories and staff offices for the Department of Chemistry. The General Wing will accommodate the offices for the Dean of Engineering, a faculty library, seminar rooms and teaching laboratories, and an active store and shops for the whole faculty.

For unity of appearance, construction and choice of materials will be similar to the existing Civil Engineering Building. The building will have a cast-in-place concrete frame structure with precast concrete panels as exterior facing. Interior partitions will be of concrete block and brick.

Provision is made for one passenger and one freight elevator. Horizontal traffic between all parts of the complex is provided for on the first and third levels according to the original program for the whole Engineering Centre.

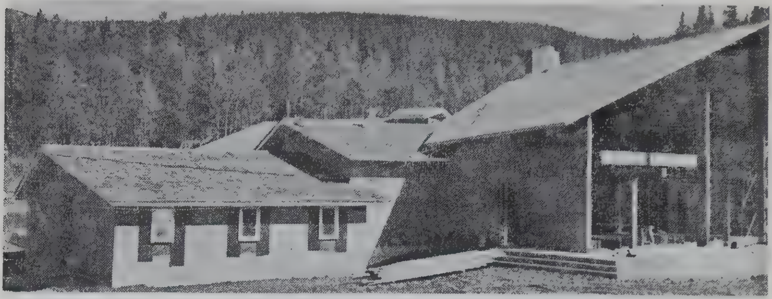
The building is designed for air conditioning although the cooling equipment will be installed at a later date. The Mechanical Room in the basement of the Chemical Wing will service this same building and the Bridge Wing. Because of the central location, the mechanical room in the basement of the General Wing will accommodate not only the mechanical equipment for the General Wing, Mechanical Wing and Common Laboratories (the latter two included in the Third Stage), but will also house the boiler plant for the whole engineering centre. In the event that the Centre will be connected to the Central Power Plant at a later date, the space of the boilers will be required for the heat exchangers.

The Chemical Wing will be provided with all services such as water, gas, vacuum, electricity.

Provision is made for future extension of both the General Wing and the Chemical Wing. The footings and columns are designed to carry two additional floors.

The total net area amounts to 57,130 square feet; the total gross area amounts to 96,113 square feet. The total net is 59.3% of the total. Omitted in the gross are 7,245 square feet which are required for the boiler plant and for the Mechanical Room of the Common Laboratories.

A contract was also awarded for casework for the project. This work includes all cabinets, benches, cupboards, panelling, tack and chalkboards, display cases, bulletin and directory boards, coat racks, etc., and all plumbing and electrical fixtures and trim associated with the cabinet work.



KANANASKIS SCIENCE STATION, LODGE BUILDING

Kananaskis Science Station

Construction of the first buildings for the Science Station which commenced on February 24, 1966, is expected to be complete by mid-summer. These first two units are the laboratory building and a residential lodge. Future plans call for duplex and quadruplex dormitories for staff and married students.

The buildings have been designed to complement the natural rustic location in which they are situated.

The laboratory has a floor area of approximately 3,328 square feet. This building contains all the necessary facilities required to perform scientific experiments and operations as required, offices, dark room and mechanical room.

The laboratory has lino tile on a wood floor joist system on perimeter grade beams and steel posts allowing a 3'0'' crawl space. The walls are wood frame with ½'' drywall to the interior and vertical cedar siding to the exterior, and a trussed roof system with plywood sheathing and cedar shingles.

Heating is by forced air duct system from a gas-fired furnace.

The main lodge has a floor area of approximately 5,609 square feet and contains men's and women's dormitories with separate washroom facilities, lounge and dining area separated by an open fireplace of stone veneer, kitchen, walk-in coolers for food storage, staff living quarters, linen room, storage area, mechanical room and two furnace rooms, and a mezzanine lounge.

The main lodge has lino tile on a concrete floor slab and also wood joists on grade beams. Walls are wood frame with drywall on the interior except the lounge area which has cedar siding and vertical cedar siding to the exterior. The dormitories, kitchen and corridor areas have drywall ceilings, the balance of the building has an exposed, rough sawn timber system. The mezzanine floor is supported by heavy, rough sawn timbers. All beam connections are exposed.

The roof is of tongue and groove cedar decking with plywood sheathing and cedar shingles.

The building is separated into four areas for heating, all of which are heated by a forced air duct system from gas-fired furnaces.

Kitchen and laboratory equipment and furniture are under separate contract while walk-in coolers are owner supplied.

Student Housing Complex, University of Alberta, Calgary

Construction of a Student Housing Complex commenced on the Calgary campus. Two eight storey Residence buildings were started on April 1, 1964, and a Food Services Building on August 25, 1964; the buildings are similar in most respects to those on the Edmonton campus. The Residences were completed on May 21, 1965, and the Food Services Building on September 22, 1965.

The Residences, which are of reinforced concrete and masonry construction provide accommodation for 412 students in each building. The majority of the students are accommodated in double rooms while some single rooms are available on each floor. Each floor also has the usual complement of washrooms and bathrooms, and common lounge areas, together with a small kitchenette and hand laundry room and a study alcove. The main floor of each residence includes a Warden's suite, a library reading room, a small guest suite and a reception office, while the basement floor has a student's recreation room and music practice rooms. Each building is served with two high-speed passenger elevators. Finishes throughout the residences are modest. A third future building of the same shape and size is allowed for in the planning.

Central Cooling Plant, University of Alberta, Edmonton

Construction of the Central Cooling Plant commenced in January, 1966, with completion expected in early 1967.

The plant will supply 40° F. chilled water to the air conditioning equipment of the University buildings. The water is distributed by a system of underground piping.

The plant building is situated underground on the south bank of the North Saskatchewan River.

The present capacity of the plant is four thousand tons of refrigeration provided by two 2,000 ton electrically driven hermetic centrifugal water chillers. Space has been provided in the plant building for additional water chillers which will be installed as the University refrigeration requirements increase. The ultimate plant capacity will be 16,000 tons.

In addition to the water chillers, the plant houses condenser and chilled water pumps, transformers and all ancillary equipment.

The building is of concrete construction with an external waterproof membrane. Rock anchors are used to counter hydrostatic forces. There are two building levels, the machine room, containing the water chillers and transformers, being the upper, and the pump room the lower. The pump room floor is 5 feet below the river bed.

There are two means of access to the plant. The first is via the river bank access road and the small entrance structure at ground level is the only visible part of the building. The second access is from the Henry Marshall Tory Building, through the University piping distribution tunnel, down a 150 foot vertical manlift and into the plant tunnel. An emergency exit is provided from the pump room to the grade above.

Chilled water is carried to the University tunnel system by two 34 inch diameter steel pipes. The condenser water piping from the river intakes is 36 inch diameter corrugated steel pipe.

River water is utilized to carry away heat rejected by the refrigeration machines. The water is drawn in through the river intakes, through stationary and self-cleaning rotating screens, pumped through the condenser tubes and back to the river.

The river bank near the building is protected from water erosion at high flood levels by a rock-filled gabion retaining wall. Radial drains were installed into the river bank for removing water during construction to maintain stability of the bank. These same drains will be used to maintain the river bank stability after the plant is in operation.

The plant receives 13,800 volt electrical power directly from the City distribution lines—it is then transformed to 4,160 volts to supply the electric motors of the water chillers and pumps. The transformers were designed for submerged conditions. In case of flooding of the plant, all, with the exception of one transformer, are disconnected by a float switch located in the pump room. The one remaining transformer will provide power to the submersible sump pumps.

Environmental Control Laboratory, University of Alberta, Edmonton

Construction commenced on December 16, 1965, on an environmental control laboratory located at the University Farm.

The laboratory is used for low temperature research to improve shelter design, more effective selection of breeding stock and generally improve feeding and management in relation to efficient production of livestock in a cold climate.

The building is of concrete block construction with wood stud interior partitions. It accommodates a training area, four environmental rooms, one respirometry room, one laboratory, office, bedroom and small shop area.

The building is "L"-shaped with a total square footage of 5,416 square feet on the main floor and 576 square feet in a small basement area under the environmental rooms for sample collecting.

The mechanical aspects of this project are of interest and some details follow.

The refrigeration requirements are confined to the environmental rooms where research functions require controlled room temperatures adjustable to twenty degrees below zero for extended periods of time. In addition, one environmental room is capable of maintaining a constant temperature of forty degrees below zero.

Heating and ventilating requirements are designed to meet the specific needs for each room. In the environmental rooms, fresh air is chilled to the low temperatures required by research activities. Chilling this fresh air to the below zero temperatures can produce severe frosting on the cooling coils, resulting in a reduction in cooling capacity. To avoid this frosting and still maintain constant temperature in the rooms, a dual coil arrangement is provided on a time clock so that one coil can maintain the low temperature while the other is being defrosted with an electrical heating element. For the office, laboratory and other working areas, fresh air is heated to comfortable working temperatures. This air is exhausted from these areas to the animal training area and then to the outside. Additional fresh air can be provided in the animal training area to reduce odors.

Plumbing services consist of office washroom facilities, laboratory services and an adequate number of floor drains to assist in the building cleaning. Special laboratory fixtures and piping are provided to handle acidic wastes. In the environmental rooms, special polyvinyl chloride floor drains and plastic piping are provided to withstand the extreme low temperatures. A special piping arrangement from these drains is used to obtain animal urine samples required by the research team.

Henry Marshall Tory Building, University of Alberta, Edmonton

Construction continued on the Social Sciences Building on the University of Alberta campus in Edmonton at 112th Street and Saskatchewan Drive. The project will consist of a 15-storey central tower building with two three-storey wings. A separate lecture theatre will be connected to the main structure by an underground tunnel. This complex will be known as the Henry Marshall Tory Building to commemorate Henry Marshall Tory, the University's joint founder and President from 1908 to 1928. On completion in 1966, it will be the largest building on the campus. A white limestone and brick finish will blend with the surrounding University buildings. The lecture theatre is the first of its design in Alberta and will contain no perpendicular walls. Covering 276,000 square feet, the complex will accommodate 5,000 students. Faculty offices and seminar rooms will be located in the central tower. The two wings are to contain about 40 classrooms each and an equal number of laboratories, while the lecture theatre will house a 500 seat lecture room, another for 300 and two for 250 seats. Facilities for audio-visual aids are to be installed in each room.

The building complex will provide facilities for the archeology, history, philosophy, sociology, political science and geography departments. The commerce department will also be accommodated in this building, but on a temporary basis.

The structural material predominantly used for the construction of this complex is reinforced concrete. A composite structural floor system of steel beams and concrete slabs will be used in the tower to provide an economical clear-spanned and flexible floor space. The interior partitions will be steel stud, concrete block and brick masonry. The roofs are to be gravelled, over built-up roofing and insulation. Fenestration consists of double glazed units in aluminum sash and frames. Interior finishes are: floors—concrete hardener, terrazzo, rubber tile and carpet; walls—plaster, concrete, concrete block and brick masonry, wood, marble and vinyl wall covering; ceilings—suspended plaster and suspended acoustic tile.

To provide air conditioning, heating and domestic hot water service, high pressure steam and low pressure steam will be supplied to the building from the University Central Heating Plant. Provision for chilled water will be made, to be supplied from the new Central Cooling Plant. In the tower and both wings the exterior rooms will be air conditioned by induction units supplied with hot water and chilled water. The interior areas will be supplied with air from a single duct system using terminal reheat units with hot water coils. Mechanical equipment rooms will be located in the tower sub-basement and on the 15th floor. In the sub-basement equipment room, hot water will be generated and pumped to the various systems and also through a tunnel system to the lecture theatre. Domestic hot water and chilled water will also be pumped to the lecture theatre via this tunnel. The lecture theatres will be air conditioned by central multizone units located in an equipment room on the mechanical floor above main floor level.

The building will be illuminated by standard fluorescent fixtures to the adequate levels as required for each function. The lighting and motor power distribution will be 600/347 volts. Receptacles and incandescent lights are to be served from a 120/208 volt system transformed down from the 600 volt system. To illuminate the lecture theatre, large (48") round fixtures will be used. In order to reduce lighting levels in this area, additional incandescent fixtures on dimmer controls will be installed. This building is to be supplied with electricity from the University 13.8 KV distribution system which will run underground through manholes. Two 750 KVA transformers will reduce the voltage to 600 volts. The tower section is to be supplied with a vertical bus-duct and each floor area will then be fed from the small electrical rooms on each floor. Auxiliary systems con-

HENRY MARSHALL TORY BUILDING (SOCIAL SCIENCES)
University of Alberta, Edmonton

duits will be provided for intercommunication, telephone, closed circuit television distribution, fire alarm and clock systems. The intercommunications system will be of a telephone type, with a push-button for digit selection rather than dialing. Lightning protection with points and ground connections will be provided on the tower. The power, telephone and intercommunication systems will be distributed on each floor through the underfloor duct system to each room, or to the modular partition walls. It will be so arranged that at any new location of partition, services could be brought into the partition.

Steam Line Addition, University of Alberta, Edmonton

A contract was awarded on May 14, 1965, for an addition to the main steam distribution system, to provide increased capacity to the Aberhart Hospital area. The additional line extends from the Provincial Laboratory of Public Health to the Nurses' Residence. Construction was completed in October, 1965.

Underground Radiation Laboratory, Chemistry Building, University of Alberta, Edmonton

Construction of this one-storey reinforced concrete underground radiation laboratory was started March 15, 1965, and was completed in October, 1965. The basement floor level is eighteen feet below finish grade with tunnel connections at the north and south ends of the Chemistry Building.

Interior wall finishes are concrete and concrete block with exposed concrete ceilings; floor finish is concrete with integral hardener. Accommodation is provided for four offices, irradiation room, Van De Graff, gamma cell, and other research areas. A manhole to the ground surface is provided for the removal of heavy equipment. Heating and cooling is accomplished through a central heating-air conditioning unit with ductwork to all areas. Ceiling-type diffusers are used for the distribution of cooled air. Lighting is generally fluorescent; power is supplied from a 600 amp main breaker located in the Chemistry Building.

Vivarium, University of Alberta, Edmonton

The future program in Medical Scientific Research necessitated the building of a new Vivarium on the University Farm at Ellerslie. Construction commenced on August 26, 1965, and is expected to be completed in mid-summer, 1966.

The proposed building will provide for the acquisition, reception, treatment and quarantine of new dogs and cats and the care of long-term post-surgical dogs and other large animals.

The facility will have a central core for reception, washing and medical treatment of dogs, the preparation of food and the quarantine of cats. The kennel area will be in wings containing outdoor runs and indoor pens initially built to accommodate 120 dogs at two to a pen.

A basement for the storage of radioactive biological waste and an incinerator will also be provided. The total floor area will be approximately 8,700 square feet in a single storey construction. The design will provide for 100 to 150 percent expansion.

The construction will be of concrete block and timber and particular emphasis will be placed on selection of materials in order to maintain as comfortable a condition as possible for the research animals.

The mechanical system will provide a steady exhaust from the kennel area in order to reduce odors and, in warmer weather conditions, cross ventilation will supplement this system.

The central core will have a forced air system of heating and ventilation. An efficient system of smoke detection and early fire warning for the protection of the occupants will be incorporated.

Alberta Liquor Control Board

Alberta Liquor Control Board Warehouse, Calgary

Work commenced on October 19, 1965, on the new warehouse in Calgary for the Liquor Control Board. The building is situated in the Mayland Industrial Park which is located on Highway #2 immediately north of the "Firestone" plant. Sufficient land (six acres) has been purchased to enable the extension of the building over the years as space requirements increase.

The main floor level of the building is elevated 4' from surrounding level; the sloping site was used to advantage for the fill material required. The quality of the sub-soil was such that piling was not required. Strip footings and pad foundations were used in the design.

The floor is reinforced concrete throughout with integral hardeners incorporated and is designed for loads of 800 pounds per square foot in the warehouse area.

Precast concrete was chosen for the frame and roof, all internal columns being set out on a module to suit pallet sizes and accessibility.

The materials for the outside walls are concrete blocks with brick facing relieved in the office and lunchroom portion of the building by use of coloured glass panels in aluminum framing.

Internal walls are generally of painted concrete block; some vinyl wall covering is proposed in the general office.

The heating system chosen for the building is low pressure hot water with a central boiler house located below the lunchroom area. The office and lunchroom areas are air conditioned with roof mounted units.

Another mechanical feature is the large refrigeration space provided for the storage of keg beer on pallets.

A high level of lighting has been provided throughout—a necessary feature in view of the fast moving lift trucks.

A transformer will be provided within the building and, because of the excessive cable distance, high voltage current is used generally.

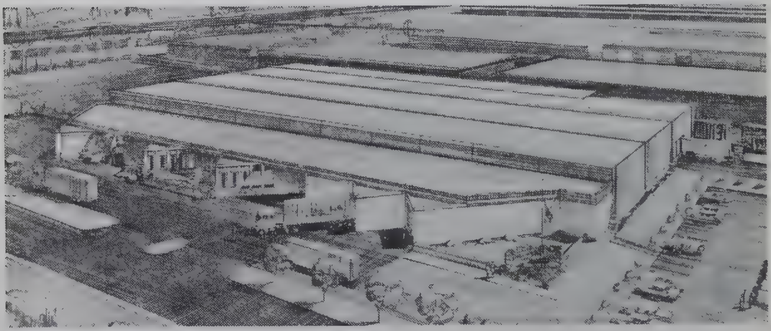
No sprinkler system is provided, it being felt that damage resulting from water would exceed that by fire; instead, a smoke detector system has been proposed together with numerous fire extinguishers of types for each situation.

The building, including truck and rail docks is approximately 110,000 square feet in area, of which 80,000 square feet are devoted to warehouse floor comprising beer area, bond area, free floor area and order picking area. This area has a clear height of 22' for efficient palletizing.

Enclosed docks have been provided for twelve trucks, eight servicing the beer area and four the liquor area. In addition, three open-air truck docks have been provided on the west wall of the building to allow for summer overload. The rail dock is also enclosed and has sufficient length for seven box cars.

Provision has been made throughout the east wall of the building to enable the addition of future extensions without disruption of the operation and with a view to the reduction of future costs.

Construction is expected to be complete by mid-summer, 1966.



ALBERTA LIQUOR CONTROL BOARD WAREHOUSE, CALGARY

Residence, Fort McMurray

A house for the Liquor Store Manager at Fort McMurray was included in a group of six residences tendered in October, 1965. With the exception of exterior finishing work, the houses were completed on December 22, 1965.

Oil and Gas Conservation Board

Core Storage Building, Calgary

A further addition to the Core Storage Building was commenced on July 22, 1965, and completed on January 26, 1966. The addition increases the core storage space by 21,832 square feet and is entirely open warehouse type accommodation. The addition matches the construction of the original building and the first addition, and consists of a precast concrete superstructure with concrete masonry exterior walls. The space is heated by gas-fired projection units.

Office Building and Garage, Edmonton

New administrative accommodation for the Oil and Gas Conservation Board was provided in Edmonton with construction of an office and garage and storage building commencing on August 19, 1965, and being completed on January 28, 1966. The office is of reinforced concrete construction with concrete block and brick veneer walls, and the front elevation is of curtain wall construction. The office building consists of a basement and one main floor for a total floor area of 4,400 square feet and the concrete block garage and storage building is 1,170 square feet in area. The office building is fully air conditioned.

Research Council of Alberta

Clover Bar Pilot Plant and Laboratory, Edmonton

The completion of the new Clover Bar facility of the Research Council of Alberta is a significant advance in broadening the services available to Alberta industry through the Council. It will permit the Research Council to expand its work on development of new products and processes beyond that possible hitherto. Work commenced on this project at the end of the previous fiscal year with the awarding of a contract for the structural steel work only for the pilot plant, followed on May 6, 1965, by the remainder of that building. The pilot plant was completed on November 30, 1965. Meanwhile, work had commenced on September 2, on the laboratory which was, in turn, finished on March 1, 1966.

The development will provide also pilot plant and laboratory facilities to companies on a lease basis, enabling them to undertake their own research and development programs. Such a concept is new to Canada and is encouraging to many Alberta firms undertaking research and development work themselves for the first time, enabling them to do so with a minimum capital outlay.

The new facilities will also permit the Research Council to continue and expand its program of research and development work on contract basis for Alberta companies, especially in the fields of chemical, mineral processing, pulp and paper and building products.

The new Clover Bar facility of the Research Council of Alberta consists of two major units: the pilot plant building and the laboratory.

The pilot plant has a ground floor area of approximately 20,000 square feet, with a clear height of 36 feet to the roof trusses. Second and third floors are built in along the south side of the building, while the remainder is open for the full height. An enclosed high-bay area with removable steel grating floor sections is provided at the southwest corner of the building to accommodate fractionating columns or other tall items of process equipment.

The pilot plant building is of structural steel construction with concrete floors, asbestos roof, and asbestos-sandwich walls. The building is designed to be fire and corrosion resistant, and separate ventilating systems are provided for the different sections of the building to isolate toxic or flammable materials.

The building design is basically an industrial-type building consisting of a steel structure enclosed with asbestos cement panels. It measures 92 feet wide by 196 feet long and contains a central high head area running the entire length of the building, about which, on either side, are two mezzanine galleries also running the entire length of the building.

The major problems facing the occupants of the building are the prevention of corrosion, which exists due to the high content of Hydrogen Chloride fumes, together with a safety precaution of providing a very high level of ventilation in view of the use of Hydrogen gas.

RESEARCH COUNCIL OF ALBERTA, CLOVER BAR LABORATORY

Services available in the pilot plant building include process steam at 200, 100 and 15 psi, water, natural gas, hydrogen, compressed air, and electric power to a maximum of 1000 KVA. A rail spur, truck loading dock, freight elevator and overhead crane are provided.

The laboratory building also has a ground floor area of approximately 20,000 square feet, and is of single storey design with a partial basement. A central courtyard provides light to the interior working areas. The building is of precast concrete construction, and is faced with precast concrete panels sandblasted to expose the aggregate.

The main floor houses a conference room, library, lunchroom and storeroom in addition to the laboratories and offices. Some of the special facilities are a physical metallurgy laboratory, an analytical laboratory, a high-temperature laboratory, and a laboratory specifically designed for handling toxic or highly odorous materials. The basement houses a machine shop, a grinding room and a large equipment storage area in addition to the building services.

Steam, water and hydrogen are supplied to the facility by Chemcell Ltd., Natural gas is supplied by Northwestern Utilities Ltd., and electric power by Calgary Power Ltd.

Paving and Related Work—Government Institutions

This area of the work deals with site finishing and landscaping at various institutions. In order to maintain a good system of roadways and parking areas, the latest construction standards for this type of work are used, taking into account such factors as load bearing and drainage requirements. Street lighting, car plug-ins, retaining walls, patios, walks are also carried out during this phase of the work. A continuous process of up-grading is constantly being carried out at the older institutions of the Province where dirt road systems and works of a like era are being improved.

The following is a breakdown of projects in this branch for the fiscal year:

Agricultural College—Olds
Foothills Provincial General Hospital—Calgary
University of Alberta—Edmonton
Lands and Forests Yard—Slave Lake
Lands and Forests Yard—Elkwater
Provincial Gaol—Calgary
Oil and Gas Conservation Board—Edmonton
Northern Alberta Institute of Technology—Edmonton
Vivarium, University of Alberta—Edmonton
Bow River Lands and Forests Site—Calgary

Provincial Park—Bow Valley
Jubilee Auditorium—Calgary
Lands and Forests Yard—Whitecourt
Provincial Park—Wabamun
Police Training School—Edmonton
Alberta School Hospital—Red Deer
Provincial Building Parking Lot—Grande Prairie
Fire Training School—Vermilion
Forestry School—Hinton
Southern Alberta Institute of Technology—Calgary
Department of Highways Yard—Edmonton
Provincial Museum and Archives—Edmonton

REPORT ON EMPLOYMENT OF PRIVATE ARCHITECTS

In view of the magnitude of the building programme for the fiscal year, the intensive technical requirements of modern buildings, and the inability to recruit the necessary additional technical staff, it was found that the Architectural Branch of the Department of Public Works was unable to cope with the programme envisaged.

The proposal to employ private consulting firms was examined and the decision reached to employ private architects and, through them, their engineering associates. The commissioning of these firms has made possible a large increase in the volume of construction carried out by the Department.

Architectural consultants are selected by a committee consisting of the Deputy Minister, the Director of Design and Construction, the Chief Architect, the Assistant Deputy Minister and the Liaison Architect. The names of those firms selected are placed before the Minister of Public Works for his approval. It has been found possible, due to the varied nature of the programme, to fit projects to a firm's capacity and the work is spread over a large number of firms. It is hoped that, shortly, all firms in the Province will have been granted a commission. Fees for this work are paid in accordance with recognized scales of charges which allow reduced fees for government projects.

The Department of Public Works controls the activities of these consultants through the Liaison Architect who is in regular communication with the consultant during design stages and through the Superintendent of Construction during the contract period.

CONSULTING ARCHITECTS AND ENGINEERS COMMISSIONED BY THE DEPARTMENT OF PUBLIC WORKS DURING THE FISCAL YEAR 1965-1966

Consultant	Type of Service	Project
F. G. Furse & Associates Ltd.—Calgary	General and Mechanical Engineering	Climate Rooms, Biological Sciences Building, University of Alberta—Calgary.
Haddin, Davis & Brown Co. Ltd.—Calgary	Mechanical Engineering	Feasibility study of plant extension of Power Plant No. 1 and South Public Works Power Plant — Edmonton
Yost, Keen, Hleck & Associates Ltd.—Edmonton	Mechanical Engineering	Central Cooling Plant, University of Alberta — Edmonton.
Western Soiltesting Ltd.—Edmonton	Foundation Engineering	Home for the Aged, McQueen No. 2—Edmonton.
Electri-Design Ltd.—Edmonton	Electrical Engineering	Gymnasium Building, Provincial Gaol — Fort Saskatchewan.
Cohos-Delesalle & Associates—Calgary	Mechanical Engineering	Addition to boilers, Heating Plant, Spy Hill Gaol—Calgary.
Bernard, Curtis, Hoggan Engineering & Testing Ltd.—Edmonton	Tests	Soil, asphalt, concrete tests, University of Alberta—Edmonton.
Curtis Testing Laboratories Ltd.—Calgary	Tests	Soil, asphalt, concrete tests, University of Alberta—Calgary.
Materials Testing Laboratories Ltd.—Edmonton and Calgary	Tests	Soil, concrete, asphalt tests — Edmonton and Calgary.
J. D. Henderson Engineering Ltd.—Edmonton	Mechanical Engineering	(a) Addition to Provincial Building—Spirit River. (b) Renovations to Administration Building — Lethbridge. (c) Construction of two cottages, Woodside Home —Edmonton.

Consultant	Type of Service	Project
Angus, Butler Engineering Ltd.—Edmonton	Electrical and Mechanical Engineering	Storage and Repair Shops, Department of Highways—Southeast Edmonton.
Kasten, Longworth & Smith Ltd.—Edmonton	Structural Engineering	Storage and Repair Shops, Department of Highways—Southeast Edmonton.
Curtis Testing Laboratories Ltd.—Calgary	Foundation Engineering Report	Treasury Branch Building—Breton.
Warnock Hersey Co. Ltd.—Edmonton	Foundation Engineering Report	Home for the Aged, Belvedere No. 3 — Edmonton.
Materials Testing Laboratories Ltd.—Calgary	Supervision	Pile driving operations at Ski Lodge, Cypress Hills Provincial Park—Elkwater.
Vinto Engineering Limited—Edmonton	Mechanical Engineering	Treasury Branch Building—Three Hills and Breton.
Materials Testing Laboratories Ltd.—Edmonton	Samples and Tests on concrete	Nurses' Residence, Alberta School Hospital—Red Deer.
Vinto Engineering Limited—Edmonton	Mechanical Engineering	(a) Construction of Provincial Building — Claresholm. (b) Addition of air conditioning, Municipal Affairs Building—Edmonton. (c) Miscellaneous steam line work, University of Alberta—Edmonton.
Winkelaar, Howard & Associates Ltd.—Edmonton	Mechanical Engineering	Renovations of: (a) Heating Plant, Northern Alberta Institute of Technology—Edmonton. (b) Steam Lines, Alberta Hospital—Ponoka. (c) School for the Deaf—Edmonton. (d) Heating Plant, Deerhome Institution — Red Deer.
Warnock Hersey Co. Ltd.—Edmonton	Foundation Engineering Report	Home for the Aged—Bashaw.
R. M. Hardy & Associates Ltd.—Edmonton	Foundation Engineering Report	Home for the Aged—Grande Prairie.

Consultant	Type of Service	Project
Jarvis Engineering—Edmonton	Electrical Engineering	(a) Provincial Building—Claresholm. (b) Treasury Branches—Three Hills and Breton.
R. M. Hardy & Associates Ltd.—Edmonton	Foundation Engineering Report	Proposed elevated water storage tank, Belmont Rehabilitation Centre—Edmonton.
Luke Lindoe—Medicine Hat	Designing and Carving Sculptural Reliefs	Provincial Museum and Archives Building — Edmonton.
Warnock Hersey Co. Ltd.—Edmonton	(a) Samples and Tests on Concrete (b) Foundation Engineering Report	(a) Veterans' Nursing Home—Edmonton. (b) Proposed Lands and Forests Building — Fort McMurray.
Curtis Testing Laboratories Ltd.—Edmonton	Foundation Engineering Report	Proposed Highways Maintenance Garage—Ponoka.
Associated Engineering Services Ltd.—Edmonton	Structural Engineering	Biological Sciences Building, University of Alberta—Edmonton.
Crowther, MacKay & Associates Ltd.—Edmonton	Mechanical Engineering	Biological Sciences Building, University of Alberta—Edmonton.
H. W. Klassen & Associates Ltd.—Calgary	Mechanical Engineering	Proposed Heating Plant, Southern Alberta Institute of Technology—Calgary.
Materials Testing Laboratories Ltd.—Calgary	Foundation Engineering Report	Public Works and Highways Building—Calgary.
Kostenuke, Forest & Associates Ltd.—Calgary	Mechanical and Electrical Engineering	Public Works and Highways Building—Calgary.
Warnock Hersey Co. Ltd.—Edmonton	Foundation Engineering Report	Department of Lands and Forests' Garage—Footner Lake.
Bernard, Curtis, Hoggan Engineering & Testing Ltd.—Edmonton	Foundation Engineering Report	Four Stall Highway Maintenance Garage—Duchess.
Olle Holmsten—Calgary	Sculptural Work	Provincial Museum and Archives Building — Edmonton.

Consultant	**Type of Service**	**Project**
John McIntosh & Associates—Edmonton	Architectural Work	Consolidated Laboratory—Edmonton.
A. Dale & Associates—Calgary	Architectural Work	Long range campus development works at Animal Science Building and Student Residence Complex, Olds Agricultural and Vocational College—Olds.
Stanley Associates Engineering Ltd.—Edmonton	Preliminary Design Study	Planning proposed bridge on 108 Street and 97 Avenue—Edmonton.
Allied Engineering & Surveying Services Ltd.—Edmonton	Topographical Survey	University Reserve and Garneau Area—Edmonton.
McMillan, Long & Associates—Calgary	Architectural Work	President's Residence, University of Alberta—Calgary.
E. K. Cumming & Associates Ltd.—Edmonton	Mechanical Engineering	Environmental Control Laboratory, University of Alberta—Edmonton.
Donald L. Pinckston—Edmonton	Long Range Planning	Agricultural and Vocational College—Fairview.
Stanley Associates Engineering Ltd.—Edmonton	Municipal Engineering	Proposed water treatment plant, water reservoir and sewage system and lagoon, Provincial Gaol—Peace River.
W. J. Francl & Associates Consulting Engineering Ltd.—Edmonton	Municipal Engineering	Water and Sewer System—Wabamun Lake Provincial Park.
W. J. Francl & Associates Consulting Engineering Ltd.—Edmonton	Municipal Engineering	Water and Sewer System—Forestry Headquarters—Footner Lake.
Strong, Lamb & Nelson Ltd.—Calgary	Municipal Engineering	Water and Sewer System—Bow Valley Provincial Park.
Wallbridge & Imrie—Edmonton	Architectural Work	Diagnostic and Receiving Centre—Edmonton.
J. H. Keating & Co. Consulting Engineers Ltd.—Edmonton	Structural Engineering	Provincial Museum and Archives Building — Edmonton.

Consultant	**Type of Service**	**Project**
Bell, McCulloch, Spotowski Associates—Edmonton	Design and Specification Work	Provision of Laboratory furnishings and equipment, Office Laboratory Building, Alberta Research Council—Clover Bar.
Leonard C. Klingbell—Edmonton	Architectural Work	Home Economics and Commercial and Academic Building, Agricultural and Vocational College—Vermilion.
White, Hosford & Impey—Grande Prairie	Site Survey	Agricultural and Vocational College—Fairview.
Vinto Engineering Limited—Edmonton	Mechanical Engineering	Chemical Petroleum Engineering Building, University of Alberta—Edmonton.
Vinto Engineering Limited—Edmonton	Mechanical Engineering	Alterations to Provincial Laboratory of Public Health—Edmonton.
Electri-Design Ltd.—Edmonton	Electrical Engineering	Alterations to Provincial Laboratory of Public Health—Edmonton.
Electri-Design Ltd.—Edmonton	Electrical Engineering	Chemical Petroleum Engineering Building, Phase I, University of Alberta—Edmonton.
T. Lamb, McManus & Associates Ltd.—Calgary	Structural Engineering	Public Works and Highways Building—Calgary.
Beatson, Stevens Associates—Calgary	Architectural Work	Court House—Fort Macleod.
Stanley Associates Engineering Ltd.—Edmonton	Municipal Engineering	Water and Sewer Investigation and Report, University of Alberta—Edmonton.
Chabot Engineering—Edmonton	Air Conditioning Work	Clinical Teaching Building, University of Alberta—Edmonton.
Vinto Engineering Limited—Edmonton	Mechanical, Electrical and Civil Engineering	North Loop Services Tunnel, University of Alberta—Edmonton
Whittaker, Carswell & Co. Ltd.—Calgary	Structural Engineering	Phase II, Civil Engineering Building, University of Alberta—Calgary.
Kostenuke, Forest & Associates Ltd.—Calgary	Mechanical and Electrical Engineering	Single Men's Hostel—Calgary.

Consultant	Type of Service	Project
Donald L. Pinckston—Edmonton	Architectural Work	Girls' Residence and Farm Structure and Farm Machinery Laboratory, Agricultural and Vocational College—Fairview.
David L. Jenkins—Edmonton	Architectural Work	Provincial Building—Falher.
Reid, Crowther & Partners Ltd.—Edmonton	Mechanical Engineering	(a) Aquarium for Biological Sciences Complex, University of Alberta—Calgary. (b) Kitchen renovations, Aberhart Memorial Sanatorium—Edmonton. (c) Bakery and Food Services Wing, Northern Alberta Institute of Technology—Edmonton.
Bernard, Curtis, Hoggan Engineering & Testing Ltd.—Edmonton	Soil and Foundation Investigations	Chemical Petroleum Engineering Building, University of Alberta—Edmonton.
J. D. Henderson Engineering Ltd.—Edmonton	Plumbing Work	Clinical Teaching Building, University of Alberta—Edmonton.
B. W. Brooker Engineering Ltd.—Edmonton	Structural Engineering	Clinical Teaching Building, University of Alberta—Edmonton.
Allsopp, Morgan Engineering Ltd.—Edmonton	Structural Engineering	Clinical Teaching Building and Printing Building—University of Alberta—Edmonton.
Cheriton Bolstad Engineering Consultants Ltd.—Edmonton	Electrical, Mechanical and Civil Engineering	Bow River Cooling Water System, University of Alberta—Calgary.
E. K. Cumming & Associates Ltd.—Edmonton	Mechanical Engineering	Printing Building, University of Alberta—Edmonton.
Cheriton Bolstad Engineering Consultants Ltd.—Edmonton	Electrical, Mechanical and Civil Engineering	Underground Utilities System, University of Alberta—Calgary.
Chabot Engineering—Edmonton	Mechanical Engineering	Renovations to Dormitory #2, Alberta Hospital—Edmonton.
Bissell & Holman—Red Deer	Architectural Work	Provincial Building—Lacombe.
D. J. Cardinal—Red Deer	Architectural Work	Provincial Building—Castor.

Consultant	Type of Service	Project
Cheriton Bolstad Engineering Consultants Ltd.—Edmonton	Mechanical and Electrical Engineering	Report on study of feasibility and economics of extending and expanding steam producing facilities of South Public Works Power Plant, University of Alberta—Edmonton.
J. Stevenson & Associates—Calgary	Architectural Work	Alberta Hospital—Calgary.
D. G. Ross—Edmonton	Architectural Work	Provincial Building—Vegreville.
Crowther, MacKay & Associates—Edmonton	Mechanical and Electrical Engineering	Calgary Hall, University of Alberta—Calgary.
Kostenuke, Forest & Associates Ltd.—Calgary	Electrical Engineering	Educational Building, University of Alberta — Calgary.
Structural Engineering Services Ltd.—Calgary	Structural Engineering	Education Building, University of Alberta—Calgary.
N. H. Fooks & Associates—Lethbridge	Architectural Work	Treasury Branch Building—Lethbridge.
A. A. Allart & Associates Consultant Engineers Ltd.—Calgary	Mechanical Engineering	Education Building, University of Alberta—Calgary.
Hilliker & Bishop Ltd.—Edmonton	Mechanical Engineering	Plant Sciences Building, Agricultural and Vocational College, Fairview.
Winkelaar, Howard & Associates—Edmonton	Electrical Engineering	Complete renovations of Wards 7 and 8, Alberta Hospital—Ponoka.
Siemens Engineering Ltd.—Edmonton	Mechanical Engineering	Complete renovations of Wards 7 and 8, Alberta Hospital—Ponoka.
Whittaker, Carswell & Co. Ltd.—Calgary	Structural Engineering	Phase III, Engineering Building, University of Alberta—Calgary.
Kostenuke, Forest & Associates Ltd.—Calgary	Mechanical and Electrical Engineering	Phase III, Engineering Building, University of Alberta—Calgary.
Vinto Engineering Limited—Edmonton	Mechanical Engineering	Physical Sciences Complex, University of Alberta—Edmonton.

Engineering consultants were also employed on most construction projects to carry out soil testing and concrete sample testing.

ANNUAL REPORT 1965-66

MAINTENANCE BRANCH

DEPARTMENT OF PUBLIC WORKS

The Department of Public Works Maintenance Branch is responsible for the maintenance of all Public Buildings, Court Houses, Treasury Branch Buildings, Auditoriums, Institutes of Technology, Highway Maintenance Garages and Repair Shops, Forestry Division Buildings, Weigh Scale Buildings, as well as Provincial Hospitals, Gaols and Sanatoriums.

Funds are appropriated for maintenance under Votes 2609, 2610 and 2612. Appropriations and actual expenditures for the respective votes are listed hereunder:

Vote 2609	$ 569,810.00	$ 591,579.37
Vote 2610	$7,147,640.00	$7,641,029.22
Vote 2612	$2,530,880.00	$2,507,380.56

The appropriation under Vote 2610 included $473,050.00 for Special Maintenance and under Vote 2612 $234,250.00 for Special Maintenance. The appropriations for Special Maintenance provided funds specifically for the renovations, major repairs, re-wiring, plumbing replacement, complete re-painting and/or re-decorating over and above the normal maintenance requirements.

Vote 2609 is the D.P.W. Maintenance Administration Vote and provides for the payment of salaries for Administrative Personnel and office staff and funds for the Truck Fleet rental. It will be noted that the appropriation for this vote was more than double that of the previous fiscal year. This increase comprised the inclusion of the salaries of all equipment operators as well as Truck Fleet rental costs. The Provincial Auditor directed that funds for this purpose be provided in this Vote. This enabled the Maintenance Branch to provide trucking services without cost to all Departments. It is to be noted, however, that trucks required at the various Institutions and Gaols continued to be charged to Vote 2612.

In each of the Votes it was necessary to obtain a Special Warrant to cover over-expenditure which was occasioned by the general pay review in April 1965, for all salaried employees as well as an increase in rates of pay for wage employees through union agreements in April and October. There was an appreciable increase in the cost of materials and supplies for all maintenance requirements.

The Maintenance Branch comprised a total of approximately 1300 employees including Supervisory Staff, Draftsmen, Tradesmen, Utility Workers and Caretakers. During the year approximately 500 to 700 wage employees were on the payroll during peak periods.

The Maintenance Branch has a total of 18 fully equipped Carpenter Shops throughout the Province. These shops have a complement of tradesmen and Utility Workers capable of handling any maintenance requirement. The D.P.W. Shops in Edmonton are fully equipped for all trades. Production of this shop includes a large volume of counters, cabinets, shelving and fittings. All Treasury Branch fixtures are manufactured here and installed by shop tradesmen.

Custodial Services are the responsibility of Custodial Supervisors located at Edmonton and Calgary. They have a staff of Caretakers under their jurisdiction who are responsible for the cleaning of all buildings. The larger buildings have Supervisory and Foreman Caretakers depending on the staff of Caretakers employed there and in some cases where more than normal shifts are required. The Caretaking staff in addition to their normal duties are required to clean snow from walks and entrances and do limited landscaping around buildings in which they are employed and where a gardening staff is not available for this purpose. At some of the Welfare Homes and larger buildings, female "Institutional Service Workers" are employed for the cleaning of female staff rooms and other areas during the normal day shift. The Custodial Supervisor is responsible also for the supervision of a considerable number of Commissionaires who are employed for the control of car parking lots and building security. The Maintenance Branch is not responsible for Custodial Services at Department of Health Hospitals, Provincial Gaols or Oil and Gas Conservation Board Offices.

The administration of the Maintenance Branch was reorganized this year by Mr. H. Brettelle, Superintendent of Maintenance, with the approval of Mr. S. E. Kenworthy, Deputy Minister, to reduce the ever increasing volume of administration as a result of the continued expansion of facilities and the construction of new buildings throughout the Province. The Province was divided into Northern and Southern regions with Regional Supervisors responsible for the administration of maintenance in their respective regions.

The Northern region was subdivided into the following areas:
1. Peace River area
2. Fort McMurray area
3. North Central area
4. City of Edmonton area

The Southern region was subdivided into the following areas:
1. Red Deer area
2. Lethbridge area
3. City of Calgary area

The Maintenance Supervisors in these areas are in turn responsible to their respective Regional Supervisor.

A guided tour service is maintained to enable visitors to tour the Auditorium in Calgary and the Auditorium and Legislative Building in Edmonton. Visitors to the Auditoriums during 1965-66 numbered approximately 50,000 and a total of 45,000 visited the Legislative Building. These visitors were from almost every part of the world and according to comments in the Guest Books, all were pleased with the tour and impressed with the attractiveness of the buildings.

Over the last three or four years the Maintenance Branch has restored the Dunvegan Mission site buildings and surrounding area and it is rapidly becoming a very popular tourist attraction. It is visited annually by thousands of tourists and in August of each year it is one of the focal points of the annual MacKenzie Days Pageant. The participants of the MacKenzie Days Pageant travel down river by boat and upon arrival at Dunvegan camp there for the night and proceed to Peace River town the following day. Arrival of the flotilla at Dunvegan is an occasion for considerable celebration. One of the main buildings contains a museum housing a great number of artifacts and other exhibits.

The Maintenance Branch each year does construction work under the Capital Vote 2682 for the Department as directed by the Deputy Minister. This construction is completed where and when it is not feasible to contract such work. Similar construction projects are completed at the Provincial Gaols where it is possible for inmate help to be utilized; this in turn, contributing to rehabilitation. During the year $1,750,000.00 of Capital Construction was completed by the Maintenance Branch. Requests are received from time to time to do work for the Alberta Liquor Control Board, Workmen's Compensation Board and Homes for the Aged. This work is completed on a Departmental Work Order which in turn is invoiced back to the Department involved.

Normally it is the policy of this Branch to utilize local help at any point where a construction project or maintenance is being done. Due to the excessive demand for all types of tradesmen and labour, it was very difficult to recruit help and as a result, it was necessary to dispatch crews from the various centres to do this work. In each case this resulted in increased costs to provide for payment of mileage and subsistence.

During this fiscal year, the Maintenance Branch commenced a small program of pre-fabrication in the D.P.W. Warehouse at Lambton Park. This operation enabled the Branch to pre-cut and preassemble buildings to provide for rapid erection in the field, especially in areas where local help is not available. It is anticipated that this operation will be expanded since it will reduce the end cost of construction in many cases.

The Government Garage and Truck Fleet are operated and maintained by the Maintenance Branch. The Truck Fleet comprises some 60 vehicles of various capacities. Trucking service is provided to all Departments which may require it, as a service. Included in the Fleet is a tractor diesel unit with high-boy trailer and furniture van making deliveries to all parts of the Province. The garage is operated to service the D.P.W. Fleet and vehicles of various other Departments.

All Maintenance commitments for this fiscal year were discharged within the appropriated amounts and a brief description of the location of work is listed as follows:

Special Maintenance—Appropriation 2610

CALGARY

Blood Donor Clinic—Floor repairs and painting
Ramp replacement

Manchester Shops—Exterior Painting
Replacement of aprons

Provincial Building #1—Boiler retubing
Interior painting
Roof repairs

Provincial Building #2—Interior and exterior painting

Southern Alberta Jubilee Auditorium—Interior painting
Caulking precast panels

Southern Alberta Institute of Technology—Interior painting
Lighting improvement
Lock replacement
Sash replacement
Replace steam lines

Oil & Gas Conservation Board—Replace steam convertor
Replace acoustic ceilings

Welfare Building—Renovations to requirements of Department of Public Welfare

EDMONTON

Main Treasury Branch—Interior and exterior painting

Alberta Research Council—Replace electrical panels
Exterior and interior painting

Legislative Building—Replace ballusters and coping
Law library renovations

Northern Alberta Institute of Technology—Exterior caulking Phase I & II
Modify roof flashing
Metal partition repairs

Alberta School for the Deaf—Fire alarm alterations
Interior and exterior painting
Curb replacement

Terrace Building—Exterior painting
Stucco "E" Block

GRANDE PRAIRIE

Highway Maintenance Shop—Exterior and interior painting
Plumbing and heating repairs
Fence repairs
Floor tile replacement

In addition to above special maintenance was completed on Provincial Buildings, Court Houses, Lands and Forests Buildings, Treasury Branches at various locations throughout the Province.

Special Maintenance—Appropriation 2612

Bowden Institution—Bowden
Interior and exterior painting
Electrical repairs
Replacement of galvanized water lines with copper in residences

Baker Memorial Sanatorium—Calgary
Heating replacement Infirmary IV
Window replacement
Plumbing replacement

Rosehaven Home—Camrose
Continue replacement of galvanized water lines with copper
Quarry tile and base in siderooms
Linoleum replacement

Alberta Institution for Girls—Edmonton
Renovate gymnasium
Exterior and interior painting

Belmont Rehabilitation Centre—Edmonton
Floor tile replacement
Exterior painting

Provincial Gaol—Fort Saskatchewan
Plumbing renovation in all blocks
Roof replacement and repairs
Interior painting

Provincial Gaol—Lethbridge
Heating conversion—5 residences
Kitchen and Bakery renovation
Roof replacement
Curb repairs

Alberta Hospital—Edmonton
Renovation of plumbing and heating
Replace galvanized lines with copper
Roof repairs
Greenhouse repairs

Alberta Hospital—Ponoka
- Renovations to Staff residences
- Linoleum replacement
- Retile shower rooms
- Recreation Hall floor replacement

Alberta Hospital—Raymond
- Interior painting

Deerhome Institution—Red Deer
- Roof repairs
- Repair curbs and walks
- Paint Power House

Alberta School Hospital—Red Deer
- Roof repairs
- Terrazzo repairs
- Conversion of heating
- Exterior and interior painting

Capital Construction—Appropriation 2682

Alberta Hospital—Claresholm
- Construct Storage Building

Aberhart Memorial Sanatorium—Edmonton
- Kitchen and Laundry renovations

Provincial Gaol—Lethbridge
- Ventilation to Laundry and Kitchen
- Farm Storage Shed

Alberta Hospital—Edmonton
- Construct Greenhouse

Provincial Laboratory of Public Health—Edmonton
- Alterations to original building

Court Houses—Grande Prairie and Peace River
- Construct Storage Building for seized goods

Highways Maintenance Shop—Fort MacLeod
- Construct Welding Shop addition

Highways Maintenance Shop—Medicine Hat
- Construct Storage Shed

Various Highway Sites
- Construct Oil and Salt Sheds and Fencing

Various Lands and Forests Sites
- Construct Implement Sheds
- Helicopter Pads and Fencing

Forest Headquarters—Footner Lake

Construct 8 residences

Southern and Northern Jubilee Auditoriums

Continue Improvements to sound system and vibration control

Southern and Northern Alberta Institutes of Technology

Capital construction to convert various areas to Department of Education requirements

Natural Resources Building—Edmonton

Overhaul and modernize elevators

Agricultural and Vocational College—Vermilion

Renovations to Student's Residence

Construct lecture rooms and Laboratory—Mechanics Building

Numerous smaller capital jobs were completed throughout the year. Generally the Maintenance Branch fulfilled all commitments.

In closing, we report with regret the passing of Mr. J. H. Atkinson, Maintenance Supervisor at Alberta Hospital, Claresholm.

REPORT OF THE PROPERTY ADMINISTRATION SECTION FOR THE FISCAL YEAR ENDING MARCH 31, 1966

This section is responsible for meeting the requirements of all Government departments for land and buildings and for the administration of such properties when acquired. These requirements generally fall into one of three categories: the acquisition of sites for development of new buildings, the purchase of existing buildings where these are available and suit the needs, or the leasing of temporary space.

When sites are required for development of new buildings, this section determines the availability of such sites and negotiates for the purchase of the most suitable site. All documentation for such purchases, including the provision of a legal description and survey plan of the site to the architectural and engineering branches, is carried out by this section. The architects are also provided with a format of the requirements of the Government department or departments for each particular project.

Acquisition of properties for major and long term developments are normally acquired under that section of the Public Works Act which provides for certain areas being declared, by Order in Council, to be Public Works Development Areas. When this procedure is adopted, the Property Administration Section is responsible for filing caveats against the titles to all properties within the specified area, and for notifying all property owners to this effect. Negotiations are then commenced for progressively acquiring these properties, but the Government is obligated at all times to purchase these properties at a reasonable figure as and when the owner wishes to dispose of the property.The owner is also entitled to lease back the property at a reasonable rental until such time as it is actually required for development.

Where temporary leased space is required, this section is responsible for finding suitable space and negotiating the most advantageous lease for such space. After the terms and conditions of these leases are approved by a Space Committee and the Minister of Public Works, then this section is responsible for administration of such leased space and for the payment of all rents.

The acquiring and granting of easements and right-of-ways is a further responsibility of this section, along with preventive and corrective measures with respect to encroachments.

The Properties Administration Section is responsible for all telephone installations and changes as required, and for the processing of all telephone charges.

Payment of grants in lieu of taxes also comes under this section.

PUBLIC WORKS RESERVES:

Prior to August, 1963, anyone desirous of subdividing property was required to provide a certain percentage of the land as a Public Works Reserve, which was intended to provide for parks, schools, Public Works, etc., and all of these properties were held under the administration of the Minister of Public Works.

In 1963, "The Planning Act" was enacted and, under Section 151 of this Act, all existing reserves which were not in use or under lease by the Government, were transferred to the municipalities in which the reserves were situated.

All reserves subject to leases come under the administration of this section and, upon termination of such leases, the Duplicate Certificate of Title is filed with the appropriate Registrar for a Title to be raised by him in favour of the appropriate municipality, in accordance with the aforementioned Section 151 of "The Planning Act".

The following is a résumé of some of the land transactions during the past fiscal year:

1. **Public Works Development Area No. 1 (Edmonton)**

   This area, known as "Government Area" was declared Public Works Development Area No. 1 in September, 1964. Since that time, properties have been purchased for future Government use as and when they become available.

   Eight properties were purchased in this past fiscal year.

2. **Public Works Development Area No. 2 (Edmonton)**

   A portion of the Garneau Area, set aside for University expansion, was declared Public Works Development Area No. 2 in August, 1965. The area affected is bounded by 110 Street on the east, 112 Street on the west, 87 Avenue on the south and Saskatchewan Drive on the north.

   Properties in this area are being acquired as and when they become available and, in the 1965-66 fiscal year, twenty-six were purchased.

   The area bounded by 111 and 112 Streets and 88 Avenue and Saskatchewan Drive is required for development by May of 1967 and efforts are being concentrated in this area for this reason.

3. **Purchase of Sites for Future Provincial Buildings, Treasury Branches and Other Government Buildings**

   Included in those sites purchased during this fiscal year were four for future Provincial Buildings, four for Treasury Branches, ten for use by the Department of Lands and Forests, and ten sites in Slave Lake and Fort McMurray, for residences for various departments.

   Among the larger purchases was a site for a proposed Court House in Red Deer and land for a Receiving and Diagnostic Centre for Children in Edmonton. In Calgary, a parcel of approximately 256 acres immediately west of the present University Campus was purchased for possible future higher educational facilities and other institutional use.

   Also in Calgary, and in conjunction with the City's Urban Renewal Scheme, a parcel of land was acquired for use as an Adult Vocational Training School and other future Government buildings.

REPORT OF THE MECHANICAL BRANCH FOR THE FISCAL YEAR ENDING MARCH 31, 1966

It is with regret that we note the death of Mr. F. E. Coe, Mechanical Superintendent, on January 3, 1966, at the age of 64 years. Mr. Coe had been with the Department of Public Works since 1938 and held the position of Mechanical Superintendent since 1953.

This Branch is responsible for the operation and maintenance of eleven power plants and seven heating plants serving major Provincial Institutions and other establishments in the Province. Plant locations are: eight in Edmonton and vicinity; two in Red Deer; three in Calgary; one at Ponoka, Camrose, Bowden, Claresholm and Lethbridge. These plants provide the utility services required, which consist of heat, power, water and sewerage disposal.

Plant and office personnel total one hundred and eighty-seven regular employees and twenty-five additional seasonal employees. A breakdown of the qualification requirements of regular employees is as follows: one hundred and nineteen are the holders of Steam Engineers Certificates, forty-six are Steam Engineer Trainees (firemen), three are clerical staff and the balance are various types of tradesmen. During this fiscal year, twenty-five new employees were hired to replace those who resigned or retired. Seventeen employees received promotions within this Branch.

The basic differences between power plants and heating plants are:

(1) Power plants are usually quite large and are situated at the larger institutions, whereas heating plants are usually fairly small and are situated at the smaller institutions.

(2) Electrical power is produced as a by-product at all power plants. This provides part of the total electrical power required at the institutions. At heating plants, no electrical power is produced and the entire electrical power requirements of the institution are purchased from a power company.

The following notes cover the major installations that were made in the power and heating plants during the 1965-66 fiscal year.

Baker Memorial Sanatorium—Calgary

A 200 gallon per minute lawn irrigation pump was installed to supplement the two existing irrigation pumps. These pumps are connected in such a manner that in case of an emergency or unforeseen problems with the domestic water supply, they can be used to supply water for fire fighting.

A small building addition was constructed onto the power plant to provide for additional storage space and to supply a suitable office for the chief engineer.

Southern Alberta Institute of Technology—Calgary

A 50-gallon per minute emergency electrically driven boiler feed pump was purchased and installed to supplement the existing steam driven feed pumps.

A major expansion to this power plant was designed and construction commenced under the direction of the Department of Public Works Architectural Branch.

Legislative Buildings Power Plant—Edmonton

Installation of the 625 KVA steam engine generator was completed at the first of this year and the unit placed in service.

Provincial Gaol—Fort Saskatchewan

Installation of the 15,000-pound per hour boiler and auxiliary equipment was completed in the fall of 1965 and placed in service.

Provincial Gaol—Lethbridge

A vacuum pump of 45,000 square feet EDR rating, to replace a unit installed some forty years ago, was purchased and installed.

Alberta Hospital—Edmonton

Installation of a 60,000-pound per hour de-aerating storage-type feedwater heater was completed in the summer of 1965. An 18,000-pound per hour dry-air condenser was purchased and installation commenced. This unit should be in operation early in the new year.

Major overhaul of the number 3 and 4 aerator-clarifier units at the sewage treatment plant was completed and plans are to overhaul unit number 2 in the next fiscal year.

Alberta Hospital—Ponoka

A 3,500 gallon hot water storage heater was purchased and installed in order to supplement the existing 8,000 gallon tank that was installed in 1957.

A 1,000 cubic foot per minute centrifugal air compressor was purchased and installed at the sewerage disposal plant. This compressor was to replace a 1,000 cubic foot per minute reciprocating compressor that was installed in 1930.

Deerhome Institution—Red Deer

The 156 KVA steam engine-generator set was placed in service in late 1965.

A major expansion to this power plant was designed under the direction of the Department of Public Works Architectural Branch.

Provincial Gaol—Calgary

A 17 cubic foot per minute air compressor was purchased and installed to supplement the existing units for the supply of compressed air to the institution.

A major expansion to the heating plant was designed and constructed under the direction of the Department of Public Works Architectural Branch.

Rosehaven Home—Camrose

A 360 gallon domestic hot water storage heater was purchased and installed to replace an old heater which had been condemned from service.

Alberta School for the Deaf—Edmonton

A 35 gallon per minute zeolite water softener was purchased and installed to duplicate the existing softener. This unit was required to provide the increased demand for services at this institution.

PROVINCIAL GOVERNMENT POWER PLANT STATISTICS

For Year Ending March 31, 1966

	FUEL		WATER		ELECTRICITY		STEAM	EXPENDITURE
	Fuel Oil (Imp. Gals.)	Gas (Cu. Ft.)	Pumped from local sources (Imperial Gallons)	Purchased (Imperial Gallons)	Generated (Kilowatt Hours)	Purchased (Kilowatt Hours)	Produced (Lbs.)	Plant Operation & Institutional Utilities
Baker Memorial Sanatorium, Calgary	620	84,633,000	23,500,700		788,090	314,040	61,112,790	$ 94,607.25
Southern Alberta Institute of Technology, Calgary	—	168,388,000		21,798,000	863,400	3,935,060	114,500,025	159,713.90
Alberta Hospital, Claresholm	150	49,853,000		4,240,300	86,060	1,353,800	38,377,750	105,356.62
Public Works South Power Plant, Edmonton	—	1,150,346,000		18,820,000	18,339,000	54,231,000	795,321,465	748,903.71
Legislative Building Power Plant, Edmonton	1,000	235,775,000		64,238,125	1,771,100	17,161,200	195,777,600	258,925.09
Provincial Gaol, Fort Saskatchewan	400	86,506,000	18,942,300		953,900	343,000	67,444,540	83,031.23
Provincial Gaol, Lethbridge	—	52,014,000		16,988,000	586,220	28,440	40,709,700	73,718.46
Alberta Hospital, Edmonton	2,900	320,705,000		90,901,870	4,945,600	181,200	267,272,300	210,977.91
Alberta Hospital, Ponoka	950	320,772,000	62,975,000		4,745,800	215,400	246,679,200	202,169.39
Alberta School Hospital, Red Deer	250	170,655,000		37,580,800	1,542,000	1,379,400	133,387,576	151,070.95
Deerhome Institution, Red Deer	250	150,090,000		41,355,550	243,500	4,121,600	124,549,800	170,935.79
	6,520	2,789,737,000	105,418,000	295,922,645	34,864,670	83,264,140	2,085,132,746	2,259,410.30

Total Fuel Oil Used	6,520 Imperial Gallons
Total Gas Used	2,789,737,000 Cubic Feet
Total Water Used	401,340,645 Imperial Gallons
Total Electricity Used	118,128,810 Kilowatt Hours
Total Steam Produced	2,085,132,746 Pounds

STATISTICS ON CAPITAL EXPENDITURES—PROVINCIAL GOVERNMENT POWER AND HEATING PLANTS

For Year Ending March 31, 1966

(W. S. Davies—Mechanical Superintendent)

	Water Storage Tanks, Water Softeners, Heaters, Piping, Pumps, Insulation.	Generating Equipment, Engines, Switchboard Wiring, Engine Foundations.	Power Plant Maintenance Equipment	Boiler Controls, Piping, Air Compressors	Atmospheric Condenser Piping, Foundation, Insulation, Controls.	Sewage Plant Equipment.	Total Expenditure (each plant)
Baker Memorial Sanatorium, Calgary	1,872.03	—	658.92	—	—	—	$ 2,530.95
Southern Alberta Institute of Technology, Calgary	1,286.09	—	—	—	—	—	1,286.09
Alberta Hospital, Claresholm	—	350.54	—	—	—	—	350.54
Legislative Building Power Plant, Edmonton	—	1,415.73	—	—	—	—	1,415.73
Provincial Gaol, Fort Saskatchewan	3,629.11	—	—	2,271.94	—	—	5,901.05
Provincial Gaol, Lethbridge	1,384.02	—	—	—	—	—	1,384.02
Alberta Hospital, Edmonton	4,297.95	—	—	—	28,996.63	18,559.36	51,853.94
Alberta Hospital, Ponoka	8,963.28	—	—	—	—	4,862.19	13,825.47
Deerhome Institution, Red Deer	4,435.02	3,959.06	—	—	—	—	8,394.08
Provincial Gaol, Calgary	—	—	—	545.00	—	—	545.00
Rosehaven Home, Camrose	2,721.70	—	—	—	—	—	2,721.70
Alberta School For The Deaf, Edmonton	651.42	—	—	—	—	—	651.42
	29,240.62	5,725.33	658.92	2,816.94	28,996.63	23,421.55	90,859.99

GAS, WATER AND POWER CONSUMPTION

at the below-mentioned Heating Plants under the jurisdiction of the MECHANICAL BRANCH—DEPARTMENT OF PUBLIC WORKS

For period April 1, 1965 to March 31, 1966

	HEATING OIL (Imp. Gal.)	GAS (Cu. Ft.)	WATER (Imp. Gallons)	POWER (Kilowatt Hours)	EXPENDITURE Plant Operation and Maintenance
Bowden Institution, Bowden	500	40,708,000	9,632,000	867,700	$ 86,556.63
Provincial Gaol, Calgary	200	39,100,000	15,425,000	1,199,200	70,251.28
Rosehaven Home, Camrose	250	53,718,000	10,100,600	732,340	81,770.25
Belmont Rehabilitation Centre, Edmonton	200	32,731,000	5,236,200	460,500	56,172.49
Alberta Institution For Girls, Edmonton	200	25,791,000	3,220,000	466,720	42,010.68
Alberta School For The Deaf, Edmonton	—	39,192,000	8,437,000	986,170	65,289.51
Northern Alberta Institute of Technology, Edmonton	1,500	189,881,000	30,084,900	10,440,000	179,926.40
	2,850	421,121,000	82,135,700	15,152,630	581,977.24

Total Fuel Oil Used	2,850 Imperial Gallons
Total Gas Used	421,121,000 Cubic Feet
Total Water Used	82,135,700 Imperial Gallons
Total Power Used	15,152,630 Kilowatt Hours

PERSONNEL REPORT FOR THE FISCAL YEAR ENDING MARCH 31, 1965

Senior Staff Changes

Mr. S. E. Kenworthy, who has been Acting Deputy Minister for the past year, was appointed Deputy Minister of Public Works on February 1, 1966. He had previously been Assistant Deputy Minister for Administration for eight years.

A position designated as Director of Design and Construction was established to provide overall direction and control for the Architectural, Engineering, Landscape Architectural and Construction elements. Mr. J. F. Hunt was selected to fill the position and arrangements were made for him to take up his new duties April 1, 1966. Mr. Hunt had been Chief Engineer for the Department of Public Works from 1959 to 1963, and had been associated with Oxford Leaseholds during the past two years.

Mr. W. S. Davies, who had been Assistant Superintendent of the Mechanical Branch for three years, succeeded Mr. F. E. Coe as head of the branch on January 4, 1966. Mr. Coe passed away January 3, after a total of 23 years of government service.

Mr. G. D. Menzies, who had been a Supervising Architect with the department for the past eight years, was appointed Assistant Deputy Minister, September 1st, 1965.

A senior architectural position was established to provide better control of the more extensive program of architectural consultant work. Mr. N. M. Fleming was selected to fill the new position April 1, 1966. Mr. Fleming had been employed by the Alberta Liquor Control Board for the past four and a half years, and previously had been with the Department of Public Works for two and a half years.

Study Regarding Departmental Personnel Functions

During the month of September, 1965, the Departmental Personnel Officer recorded work for the one month period. This data was analyzed in order to determine which functions were costing most of the time of the Personnel Officer, with a view to ensuring that emphasis was not misplaced. The study provided the following data:

Recruitment and selection (Salaries)	42%
Recruitment and selection (Wages)	7%
Forms for D.P.C. and records	6%
Forms and letters regarding release and retirement	1%
Providing information regarding classifications, pay and working conditions for employees and prospective employees	6%
Discussing and processing classification material	8%
Discussing disciplinary matters and preparing correspondence	3%

General correspondence	6%
Special projects of non-recurring nature	17%
Policy discussions with Deputy Minister and branch heads	3%
Personal diversions	1%

As a result of this study, it was decided to augment the personnel staff and to delegate some of the recruitment and selection work.

Operation of the Personnel Office

The functions of the Personnel Office were expanded and improved during the year in the following ways:

(1) All selection panels conducted by the Public Service Commissioner's Office were attended by at least two departmental representatives. These included one or more from the appropriate branch and one from the Personnel Office.

(2) All departmental competitions were conducted with a panel first reviewing the applications and then selecting the most suitable candidate by interviewing. The panels in all cases included representatives of appropriate branch and the personnel office. A standard system was introduced to provide for allocating points based on such factors as education, experience, age, condition of health, personal suitability and seniority. The feasibility of standardizing the factors to be considered for each particular trade will be studied in more detail during the next fiscal year. Such a system will provide better selections for transfers and promotions, and will ensure that all candidates have fair and equitable opportunities for advancement.

(3) Below average performers are now being provided with both oral and written counsel regarding problems and corrective action to be taken.

(4) Submissions for reclassification are being studied and firm recommendations are being provided before these are forwarded to the Public Service Commissioner's Office.

(5) Discussion and counselling service is being provided for employees regarding conditions of employment, entitlements, preparation for advancement and special problems.

(6) Personnel policy directives were introduced to provide guidance and control for conditions which are peculiar to the department and are not covered in the Public Service Act, Government Regulations or Orders-in-Council. These covered such subjects as: eligibility of close relatives for employment, moving allowance benefits, influence of employees through gifts or other negotiations and establishment of immunization programmes as a condition of employment at institutions.

Training Costs Committee

The Department of Public Works Training Costs Committee was authorized October 1, 1965, and the first meeting was held October 21, 1965. Basic criteria was outlined and a decision was made to have some funds appropriated in the estimates. During the four subsequent meetings, the criteria was more closely defined and the following cases processed:

Cases approved for 75% reimbursement	17
Cases approved for part-time employment during courses	2
Cases considered and approved for leave of absence without pay for a reasonable number of hours out of each working day	1
Cases cancelled and rejected	2
Total cases processed	22

It is anticipated that as a result of experience and refinement of the guidelines for approval of course costs, it will be possible to further improve the operation of the committee in the future. Better criteria will ensure that only those courses that will increase the employee's qualifications and up-date his procedures, practices and knowledge will be favourably considered.

Special Personnel Problems

During the year, two special investigations were carried out in order to analyze conduct, control and discipline problems and to take appropriate remedial action. Action taken as a result of these investigations was the prerogative of the line branch managers and the Deputy Minister, with recommendations being provided by the Personnel Officer. It is anticipated that in future, the line branch managers will assume more responsibility for investigations regarding control of the personnel within their jurisdictions.

Overseas Recruiting Program

A recruiting team of representatives from the Central Personnel Administration Office and two other departments with Mr. G. D. Menzies of Public Works, conducted an overseas recruiting program in November and December of 1965. The extensive advertising program and the assistance from the office of the Alberta Government representative in London, England, resulted in a total of 61 applications for Department of Public Works positions. In summary, these were processed and concluded as follows:

	Applications	Interviews	Offers	Acceptances
Architects	27	16	12	2
Engineers	2	0	1	0
Technical Assistants (Senior Draftsmen)	32	25	10	5
	61	41	23	7

The entire program was a success considering the costs involved and the immediate results. However, in addition, such a program has a long range result that is not evident in the immediate results. Three of the applicants have contacted Mr. Menzies since the original offers of employment were rejected, and one of these has been recruited. It is expected that the contacts made during this program will continue to contribute to our recruiting in the future.

Statistical Data

The following data provided some indication of the changes that occurred during the year. In future, a year to year comparison of such information may be useful as a measure of progress.

Establishment

Position establishment on April 1, 1965	1,722
Positions added to establishment from 1965/66 estimates	124
Positions added to establishment during the year in accordance with Public Service Act, Section 14	17
Total positions as at March 31, 1966	1,863
Positions reclassified	54
Positions submitted but not reclassified	18
Positions pending March 31, 1966	4
Total	76

Employees

Employees promoted	89
Employees demoted	2
Total employees promoted and demoted	91
Employees terminated during the year	
Resigned (including temporary summer) relief employees)	115
Retired	27
Deceased	15
Transferred to other departments	14
Dismissed	10
Total	181
Vacancies advertised through the Personnel Administration Office	129
Positions advertised through D.P.W. competitions	94
Total vacancies advertised	223

GRANTS PAYABLE UNDER THE PUBLIC WORKS ACT, CHAPTER 270, SECTION 19(1), TOWARDS THE COST OF CONSTRUCTION OF SWIMMING POOLS OR THE IMPROVEMENTS THEREOF

1. A grant of $7,000.00 or one third of the actual cost of construction, whichever is the lesser amount, is payable towards the cost of construction of a swimming pool.
2. A grant of $7,000.00 is payable towards the cost of improvement to an already existing swimming pool for which no grant has already been paid, or one third of the actual cost of such improvements, whichever is the lesser amount.
3. Grants as set forth above are payable to Municipalities with a population of not more than 10,000.
4. Approval by the Architects of the Department of Public Works must be obtained for the plans of the pool and drainage arrangements.
5. Approval of the plans of the pool as to sanitary arrangements must be obtained from the Sanitary Engineer of the Department of Health.
6. The grant will be computed from an audited statement of expenditure which must be submitted to the Department of Public Works.
7. The title of the swimming pool must be held by the Municipality, village, town or city.

During the fiscal year 1965-66 a total of $14,000.00 was paid to the following as "swimming pool grants":

Village of Carbon
Town of Beaverlodge

THE CROWN PROPERTY MUNICIPAL GRANTS ACT

Under "The Crown Property Municipal Grants Act", being Chapter 20 of the Statutes of Alberta, 1961, and amendments and regulations thereto, grants are paid on all Crown owned properties other than the following:

(a) real property forming part of an undertaking in respect of the conservation, irrigation, reclamation, rehabilitation or reforestation of land;

(b) any park, historical site, monument or museum;

(c) except when otherwise prescribed by the Provincial Treasurer, real property leased to or occupied by a person from whom the municipality may, by reason of his interest in the property, levy and collect a municipal tax;

(d) real property used for or in connection with academic, trade, forestry or agricultural schools, colleges or universities;

(e) real property used for or in connection with hospitals and mental institutions;

(f) (deleted by amendment);

(g) real property comprising streets, lanes, roadways or road allowances;

(h) real property that is not used or actively occupied by the Crown and that is not occupied by a person under a lease, licence permit or agreement for sale;

(i) real property owned by the Alberta Liquor Control Board, the Alberta Government Telephones Commission or the Workmen's Compensation Board;

(j) any specific property or class of real property exempted from the provisions of the Act by the Lieutenant Governor in Council.

In addition to this, grants are paid on any building which would otherwise be excluded but which are serviced by local utilities services, such as forestry ranger buildings.

In the case of grazing leases on Crown lands, a portion of the lease fee is returned to the Municipality and such payments made are not included in the figures shown as payments made under "The Crown Property Municipal Grants Act".

GRANTS IN LIEU OF TAXES

During the fiscal year 1965-66, a total of $1,642,952.99 as grants in lieu of taxes for Government buildings was paid to the following Cities, Towns, Villages, Counties and Municipal Districts throughout Alberta:

CITY OF:

Calgary	$319,065.46
Camrose	9,768.66
Drumheller	12,789.11
Edmonton	788,153.66
Grande Prairie	44,582.16
Lethbridge	34,144.42
Medicine Hat	6,661.90
Red Deer	25,529.46
Wetaskiwin	8,093.03

TOWN OF:

Athabasca	1,584.36
Barrhead	6,035.12
Black Diamond	196.35
Blairmore	1,820.04
Bonnyville	3,863.32
Bow Island	38.17
Brooks	1,778.86
Cardston	2,712.15
Castor	554.09
Cold Lake	487.20
Coleman	573.60
Coronation	738.99
Devon	1,392.93
Didsbury	454.35
Drayton Valley	2,659.05
Edson	13,701.82
Fairview	995.41
Falher	475.41
Fort Macleod	4,554.77
Fort Saskatchewan	47,617.04
Granum	482.00
Grimshaw	5,524.35
Hanna	10,036.65
High Prairie	7,762.26
Hinton	445.92
Innisfail	1,127.16
Lac La Biche	7,458.78
Lacombe	3,278.00
Manning	1,562.40
Mayerthorpe	4,629.60
McLennan	757.68
McMurray	1,895.84
Nanton	104.70
Olds	549.47
Peace River	21,222.20
Ponoka	945.18
Redwater	1284.00
Rocky Mountain House	3,554.20
Smoky Lake	81.78
Spirit River	3,090.20
Stettler	3,372.11
Stony Plain	160.32
St. Paul	5,292.45
Swan Hills	842.40
Taber	1,087.80
Three Hills	316.40
Two Hills	1,218.90
Valleyview	2,749.10

TOWN OF:

Vegreville	$ 4,425.68
Vermilion	2,045.98
Viking	410.13
Vulcan	477.31
Wainwright	943.20
Westlock	846.99
Whitecourt	2,922.40

VILLAGE OF:

Andrew	366.60
Bon Accord	165.20
Boyle	18.24
Breton	130.20
Chipman	39.15
Cochrane	95.70
Consort	817.74
Coutts	168.75
Czar	349.44
Duchess	376.80
Elnora	186.75
Evansburg	192.64
Hines Creek	477.90
Killam	749.56
Kinuso	47.45
Rycroft	1,441.05
Ryley	565.62
Slave Lake	2,691.70

COUNTY OF:

Forty Mile #8	754.72
Grande Prairie #1	272.80
Lac Ste. Anne #28	7,794.21
Lacombe #14	580.50
Leduc #25	2,603.90
Lethbridge #26	38,284.32
Newell #4	3,653.87
Ponoka #3	6,938.40
Red Deer #23	69,092.24
St. Paul #19	48.05
Smoky Lake #13	30.42
Stettler #6	101.06
Strathcona #20	2,240.31
Thorhild #7	22.44
Two Hills #21	96.75
Vermilion River #24	2,452.84
Warner #5	735.07
Wetaskiwin #10	718.96
Wheatland #16	200.45

MUNICIPAL DISTRICT OF:

Fairview #136	973.56
Foothills #31	1,444.08
Peace #135	199.58
Rockyview #44	45,830.20
Stony Plain #84	875.27
Sturgeon #90	4,636.02
Westlock #92	150.40
Willow Creek #26	1,260.78

Improvement District of Canmore #46	1,617.58
Improvement District of Entrance #96	1,488.78
Improvement District of Raven River #65	789.10

SUMMARY OF EXPENDITURE BY THE DEPARTMENT OF PUBLIC WORKS FOR THE FISCAL YEAR ENDING MARCH 31, 1966, AND THE CORRESPONDING FIGURES FOR THE PREVIOUS FIVE YEARS.

Appropriation Number	Description	Amount 1965 - 1966	Total 1965 - 1966	1964 - 1965	1963 - 1964	1962 - 1963	1961 - 1962	1960 - 1961
	ADMINISTRATION:							
2601	Minister's Office	$ 19,611.92	$	$ 19,826.65	$ 21,105.15	$ 18,719.66	$ 16,574.47	$ 16,965.52
2602	General Administration	308,454.93		265,374.42	307,950.76	303,893.42	285,386.43	285,875.72
2606	Public Building Staff	1,053,103.44		905,232.22	868,075.25	859,504.28	799,975.18	727,579.79
2608	Mechanical Branch	55,577.87		49,180.05	48,305.35	49,642.11	49,587.50	45,221.96
2609	Maintenance Branch Administration	591,504.37	2,028,252.53	262,766.11	—	—	—	—
	MAINTENANCE:							
2610	Legislative & Public Buildings—Maintenance	7,640,044.85		6,885,676.46	6,167,042.90	5,774,306.02	5,281,958.59	4,875,410.17
2612	Public Institutions—Maintenance	2,507,108.06		2,302,316.38	1,806,865.52	1,637,248.57	1,510,067.74	1,429,715.34
2614	High Pressure Power Plants	2,259,410.30		2,111,109.12	2,002,671.01	1,756,036.45	1,573,583.64	1,338,611.72
2615	Low Pressure Power Plants	581,977.24		531,116.88	497,239.15	399,720.18	296,202.94	260,184.96
2620	Government Automobile Service	78,650.92	13,067,191.37	80,199.49	74,223.68	77,469.05	76,370.11	74,571.50
	GRANTS:							
2624	Grants to Municipalities for Swimming Pools	14,000.00		28,232.32	14,000.00	56,000.00	42,000.00	21,593.71
2625	Grants for Construction of Police Buildings	111,333.36		70,768.10	312,727.29	123,181.86	625,902.77	—
2626	Grants to Municipalities in Lieu of Taxes	1,642,900.55	1,768,233.91	1,544,669.82	1,461,790.64	1,403,891.05	—	—
	CAPITAL:							
2681	Administrative & Judicial Buildings—Furnishings & Equipment	455,172.68		437,303.98	414,652.65	5,192,351.93	3,525,469.42	4,310,094.98
2682	Public Buildings—Sites and Construction	37,778,360.82		19,363,809.10	13,155,337.37	24,846,075.81	22,570,702.47	24,024,477.90
2683	Specialized Institutional and Departmental Buildings—Furnishings and Equipment	6,771,299.15		4,735,109.95	6,843,585.24	—	—	—
2684	Power Plants Construction	90,859.99	45,095,692.64	118,165.72	131,321.85	209,600.59	106,104.16	89,317.15
			$61,959,370.45	$39,710,856.77	$34,126,893.81	$42,707,640.98	$36,759,885.42	$37,499,620.42